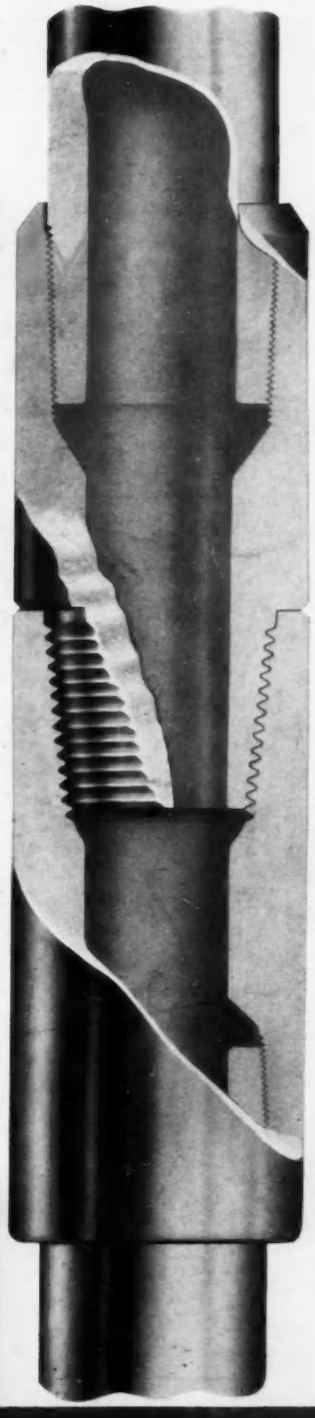
The
OIL WEEKLY
OIL and GAS ENGINEERING
FOR OIL AND GAS PRODUCTION, PIPE LINE DIVISIONS
THE WEEK'S NEWS INTERPRETED

Again
REED LEADERSHIP TRIUMPHS
OK
says the
AMERICAN PETROLEUM INSTITUTE
and ADOPTS
REED
FULL HOLE
TOOL JOINTS
as STANDARD



FOR DECREASED DRILLING COSTS

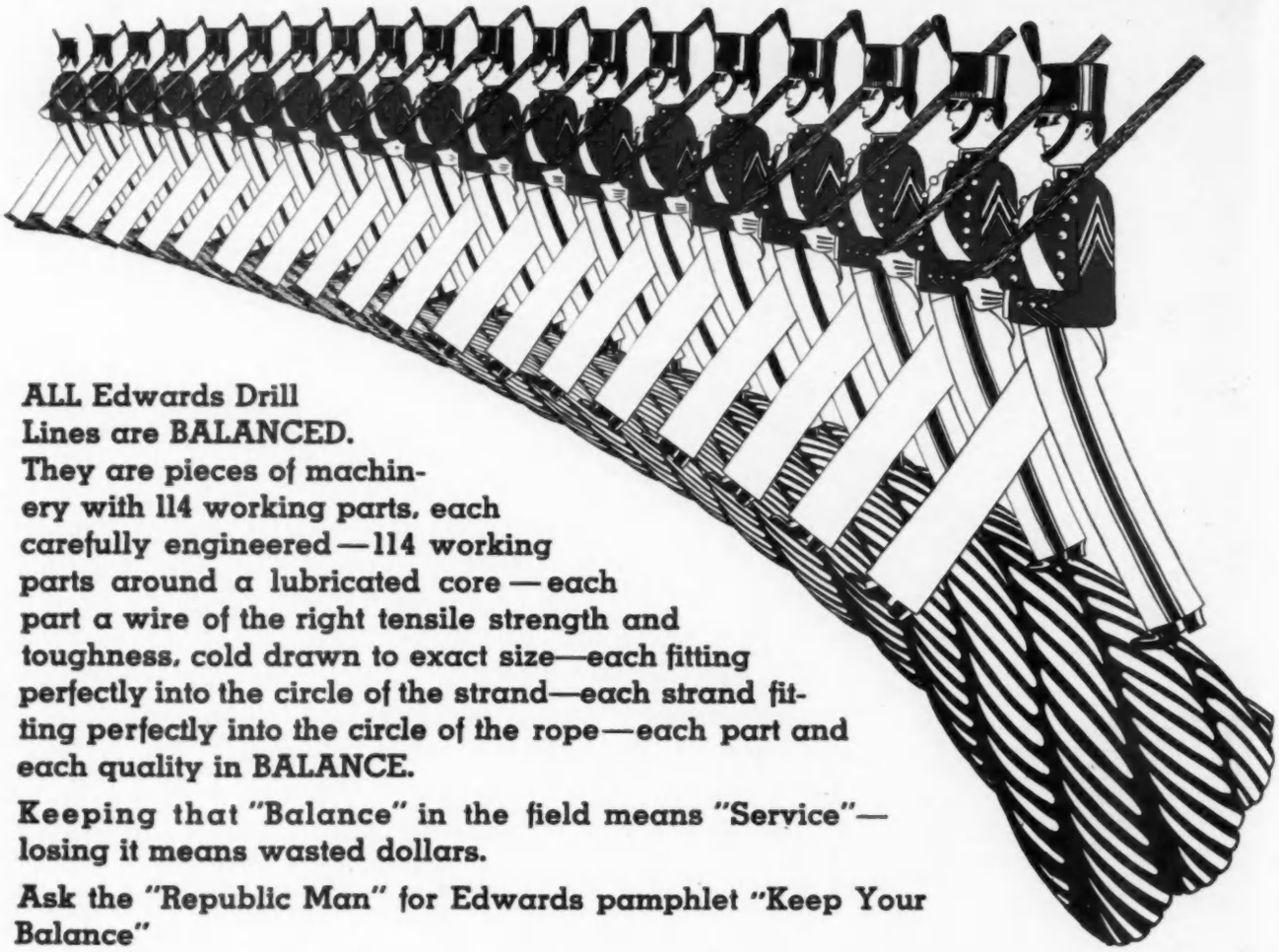
REED ROLLER BIT CO.

EVERYWHERE THERE IS ROTARY DRILLING

FOR INCREASED DRILLING SPEEDS

BALANCED DRILL LINES

6 STRANDS - 19 WIRES EACH - 1 HEMP CENTER



ALL Edwards Drill Lines are BALANCED. They are pieces of machinery with 114 working parts, each carefully engineered — 114 working parts around a lubricated core — each part a wire of the right tensile strength and toughness, cold drawn to exact size—each fitting perfectly into the circle of the strand—each strand fitting perfectly into the circle of the rope—each part and each quality in BALANCE.

Keeping that "Balance" in the field means "Service"— losing it means wasted dollars.

Ask the "Republic Man" for Edwards pamphlet "Keep Your Balance"

YOU CAN BET YOUR LIFE ON

EDWARDS WIRE ROPE

EXCLUSIVE MID-CONTINENT DISTRIBUTORS

REPUBLIC SUPPLY CO.

HOUSTON, TEXAS

SUPPLY STORES IN ALL MAJOR FIELDS

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year. 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

WHEN YOU'VE SPENT A FORTUNE TO DRILL AN OIL WELL...

A few extra dollars for a BAKER CEMENT WHIRLER SHOE *WILL HELP PROTECT YOUR INVESTMENT!*

WHEN you've spent months of effort and a mint of money drilling a deep well, invest a few more dollars in a Baker Cement Whirler Shoe to assure a safe landing and the best cement job.

The side openings slant upward and are baffled to direct the slurry in a spiral around the pipe, whether the casing is hanging free or is set on bottom.

IN addition to the regular bottom circulation hole the Baker Cement Whirler Shoe has a number of side ports leading out of the valve chamber below the valve seat. These outlets, "baffled" by plates set in grooves cut in the wall of the shoe, direct the slurry upward and whirl it about the casing.

Whether the shoe is set on bottom, leans against the wall of the hole or hangs free you know that the cement will be more completely distributed around the pipe—with less danger of channeling.

The Baker Cement Whirler Shoe is a Guide and Float Shoe as well as a Cement Shoe. Only Baker-Formula Concrete and Bakelite are used in the construction of the plug and valve mechanism. Thus, it has the same efficient, double seal buoyant ball valve, ample strength and complete drillability that distinguish Baker Cement Equipment from all others, everywhere.

All Baker Cement Equipment is described in detail in the new 1935 Composite Catalog.

Cross section of Baker Cement Whirler Shoe showing side outlets and double seal valve mechanism.

Strength—
Valve Efficiency—
Drillability—

You will always find a *balanced* combination of these three essentials for guiding, floating and cementing casing in all Baker Cement Equipment.

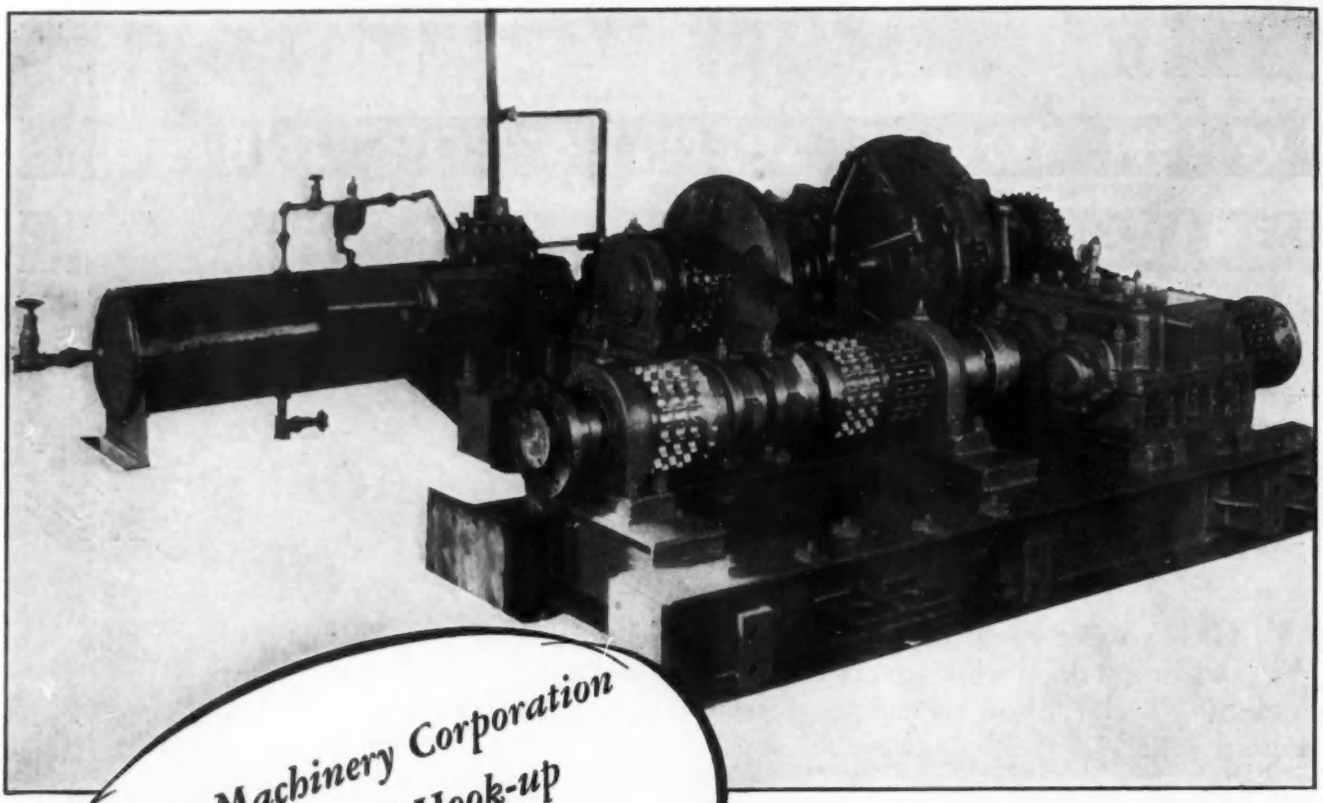
NRA

BAKER OIL TOOLS, INC.

SEE OUR DESCRIPTIONS IN THE COMPOSITE CATALOG

P. O. BOX 609, HUNTINGTON PARK, CALIFORNIA

COALINGA • TAFT • HOUSTON • OKLAHOMA CITY • TULSA • NEW YORK CITY



Sheldon Machinery Corporation Double Diesel Hook-up for Oil Well Drilling Completely Hyatt Equipped

Two Diesel engines are placed end to end for driving the hook-up—a drilling engine and a pump engine. The power take-off shafts of both engines are mounted on HYATT ROLLER BEARING PILLOW BLOCKS made by the H & O Machinery & Engineering Company.

A 1 to 1 ratio gear box and shaft are mounted on a base between the engines. The gear box serves two purposes—coupling both engines together for heavy pulls driving the drill or the pumps from either engine. If the drilling engine is shut down for any reason, the pump engine will drive not only the pumps but through the gear box it will also drive the drill.

The same holds true of the pump engine. Four HYATT ROLLER BEARINGS are in the gear box. The outboard shaft is also mounted on two HYATT ROLLER BEARING PILLOW BLOCKS. The driving and driven elements of the forward and the reverse clutches too are mounted on HYATT ROLLER BEARINGS.

The first of these outfits has been in operation continuously in Mexico since 1930. Another in Northern Mexico is now drilling at a depth of 8,100 feet. Others in the United States have been drilling economically. Recently a well was completed in New Mexico with a total consumption of only seventy-five barrels of fuel oil.

Mr. N. A. Kominus, Chief Engineer of Sheldon Machinery Corporation, New York, states—"to date not a single HYATT ROLLER BEARING has been replaced on any of our outfits." Hyatt Roller Bearing Co., Newark, Detroit, Chicago, Pittsburgh, Oakland.

H Y A T T

ROLLER BEARINGS

PRODUCT OF GENERAL MOTORS

THE OIL WEEKLY

ENGINEERING • STATISTICS • THE WEEK'S NEWS

EDITORIAL STAFF

WARREN L. BAKER
Editor

J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS

JACK LOGAN — BRAD MILLS
WM. V. GROSS

DISTRICT EDITORS

B. F. LINZ.....Washington
FLOYD SWINDELL.....Tulsa
H. H. KING...../Fort Worth
W. E. GREEN...../Los Angeles
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
CHAS. LEYENDECKER.....Houston

PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

Copyright, 1935

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*

ADVERTISING STAFF

DICK SWINSKY.....New York
W. W. PIGUE.....Pittsburgh
T. W. NELSON.....Chicago
J. F. CARTER, JR.....Tulsa
W. E. GREEN.....Los Angeles
CHAS. WYATT.....Houston
WM. ATCHESON.....Houston

W. J. HUDSPETH
Circulation Manager

Contents • February 4, 1935

Volume 76 ◆ Number 8

THE CHANGING PANORAMA..... 7

NEWS OF THE WEEK:

Continued Stability Promised..... 9
By Jack Logan

Oklahoma Legislators Hear New Proration Plan..... 11

Confusing Injunctions in Texas Courts..... 11

Employment Increase Under Oil Code..... 12

Interstate Oil Compact Passed in Oklahoma..... 14

Revised Texas Tender Order..... 14

Production 43
Crude Prices 45
Personals 16
"Squeaks" 81

GENERAL FEATURES:

Kansas' Future Crude Oil Reserve Status..... 19
By Robert H. Dott

PRODUCTION ENGINEERING:

The Trend in Petroleum Technology..... 27
By Stanley Herold

Operating Practice at Hobbs to Prolong Flow..... 28
By Brad Mills

Obtaining Pressures in Oil Production and Their Significance.... 33
By S. F. Shaw

FOREIGN DEVELOPMENTS:

Yugoslavia Joins Ranks of Wildcatting Nations..... 39
By Leo Tiuka

MARKETS AND STATISTICS:

Prices Lower Due to Hot Oil Increase..... 41

January Brings Continued Favorable Statistics..... 46
By Jack Logan

Production Declines 100,000 Barrels..... 43

FIELD REPORTS:

Oklahoma 50
California 68
Kansas 51
Texas 52
Louisiana 62
Michigan 70
Mountain 66
Wildcats 71

NEW EQUIPMENT FOR THE FIELD..... 78

Items About Manufacturers..... 76

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

BRANCH OFFICES

NEW YORK.....250 Park Ave.
PITTSBURGH.....Standard Life Bldg.
CHICAGO.....141 W. Jackson Blvd.
LOS ANGELES.....Haas Bldg.
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

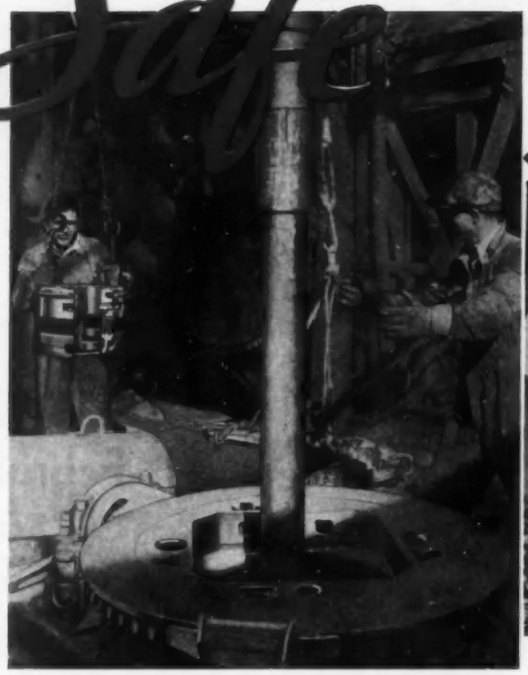
Member Audit Bureau of Circulations.

Published every Monday. Single Copies 15 cents. Subscription price: domestic and foreign, $1.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies.

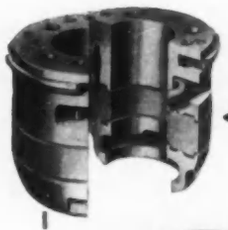
Advertising rates on application.

WHEN A BLOWOUT THREATENS

will you be **Safe** *or* **Sorry**



A Blowout is an interesting spectacle to the curious bystanders, but it lacks entertainment value for the operator who is paying the bills. It is cheaper to prevent a blowout than repair the damage.



The rubber packer provides safe sealing.

1

3

2

1. Autolock Packing Assembly, showing rugged construction and latch which locks assembly about pipe. 2. Autolock Packing Assembly closed, showing the retainers which hold the assembly in body. 3. Blowout Preventer body with Packing Assembly in place.

BAASH-ROSS BLOWOUT PREVENTER

The Baash-Ross Blowout Preventer, quickly applied at the first warning of danger, is instantly effective in keeping the mud from being expelled from the hole by rising gas pressure.

The steel body of the preventer with the lip ring attached is screwed into the top coupling of the casing. The bore of the body is large enough to permit the free passage of drilling and fishing tools.

The packing assembly, consisting of two split steel rings with a heavy rubber packer between them, is hung by a line in the derrick, open and ready for instant use. At the first indication of an impending blowout the assembly is swung against the pipe where it automatically closes and locks in place. It is then lowered into the body, where it is held securely by spring positioned rings located near the top of the Autolock Hinged and Latched Packing Assembly.

The well is sealed by lowering the pipe until a coupling rests on the top steel ring, compressing the packer; or by raising the pipe until a coupling contacts the bottom ring; or by screwing down the lip ring to compress the packer, thus allowing the pipe to be raised or lowered between couplings.

Send for complete details of how the Baash-Ross Blowout Preventer will protect your well, or see the description in the 1935 Composite Catalog.

When you think of Drill Collars and Kellys think of . . .

BAASH-ROSS TOOL COMPANY

Telephone 3-4406
1559 S.E. 29th St.
OKLAHOMA CITY

Telephone Hadley 6676
1301 Maury Street
HOUSTON

Telephone 599
BEEVILLE
TEXAS

Gulf Coast Distributors: NORVELL-WILDER SUPPLY CO.

General Offices: 5512 Boyle Ave., Los Angeles, Calif. • Export Offices: 30 Church St., New York, N. Y., U. S. A.

BAASH-ROSS TOOL COMPANY B-R

VOLUME 76, No. 8 FEBRUARY 4, 1935

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

Court Confusion

A SERIES of confusing injunctions issued in federal courts, and Texas district and appeal courts, leave some of the oil control measurements "up in the air" until they are settled finally. These apply to efforts to move oil without approved tenders from the railroad commission.

Each week the status of these efforts has been changed, with first the operators and then state control agencies holding the upper hand. Last week additional confusion was added when a court of appeals granted stay orders preventing movement of oil released by previous injunctions. Meanwhile district courts continued issuing orders permitting movement of oil products without tenders. In the federal courts the railroads serving East Texas and the Texas attorney general department have been playing tag, with first one being "it" and then the other. Page 11.

January Statistics

THE satisfactory statistical situation of the petroleum industry during preceding months was maintained during the opening month of 1935.

Production remained at reasonable levels, despite an increase in hot oil production and the fact that output of reported crude was 44,000 barrels above the federal allowable, as evidenced by continued shrinkage of crude stocks. Gasoline stocks increased, but this is in accordance with desires of the administration, which realized two months ago that they had been permitted to become too low.

Drilling operations in the United States remained at the high level maintained during closing months of 1934. An average of 47.9 wells were completed, being 20 percent greater than in January, 1934, and 60 percent larger than in January, 1933. Page 46.

Prolong Natural Flow

OPERATORS in the Hobbs, New Mexico, field have adopted producing practices that will equalize and flatten the future decline in reservoir pressures. These measures, the success of which are reflected by the steady reservoir pressure of the field, were adopted voluntarily. The natural flowing life of wells is ex-

The Oil Man's Calendar

FEBRUARY
18-21 *Petroleum Division, A. I. M. E. (A. I. M. E. Annual), New York.*
20-22 *Southern Gas Association, Dallas, Texas.*

MARCH
21-23 *American Association of Petroleum Geologists, Wichita, Kansas.*

APRIL
8-13 *Oil Equipment and Engineering Exposition, Houston, Texas.*
11-13 *Petroleum Industry Electrical Association, Dallas, Texas.*
22 *American Chemical Society, New York.*

MAY
1-3 *Natural Gasoline Association, Tulsa, Oklahoma.*
8-11 *Oil and Gas Power Division, American Society of Mechanical Engineers, Tulsa, Oklahoma.*
14-16 *American Petroleum Institute, Mid-Year Meeting, Mayo Hotel, Tulsa.*

JUNE
20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

NOVEMBER
4-5 *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*
11-14 *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*

pected to be prolonged by conservation of gas and checking of water encroachment.

Remedial work, especially during the last two years, has been an important accomplishment. Through a gradual reduction in the average gas-oil ratio and shutting off of upper water in a number of wells, bottomhole pressure for the entire field has shown a gradual increase since June 1, 1934, and as a result operating practices being used at Hobbs are of interest. Page 28.

Just a Nuisance?

THE federal government has disappointed the oil industry in not accomplishing a closer check on illicit operations through its crude production and crude processing tax levy, whose sponsors, at the time it was passing the Congress, predicted such measures would work wonders in curbing hot oil production.

So far only a few convictions with modest fines have been assessed. However, it now looks as if the government agents are beginning to show some life. Last week a tax lien was filed on nine plants and additional indictments are due, it is said.

Employment Increases

EMPLOYMENT has increased 46.4 percent in the oil industry, the National Industrial Recovery Board was told last week. The figures were based upon a survey made in May, 1934, and were compared with May, 1933. The largest increase was in the drilling division, which showed an increase of 77.8 percent, due to greater activity as well as shorter hours. The limitation of hours and code wage regulations have increased the industry's payrolls 17.3 percent. The statistics presented showed that this industry has re-established employment of those regularly attached to it at levels 7.7 percent above the abnormal year 1929.

Page 12

Oklahoma Notes

OKLAHOMA last week became the third important oil producing state to enact legislation approving the proposed interstate oil control compact.

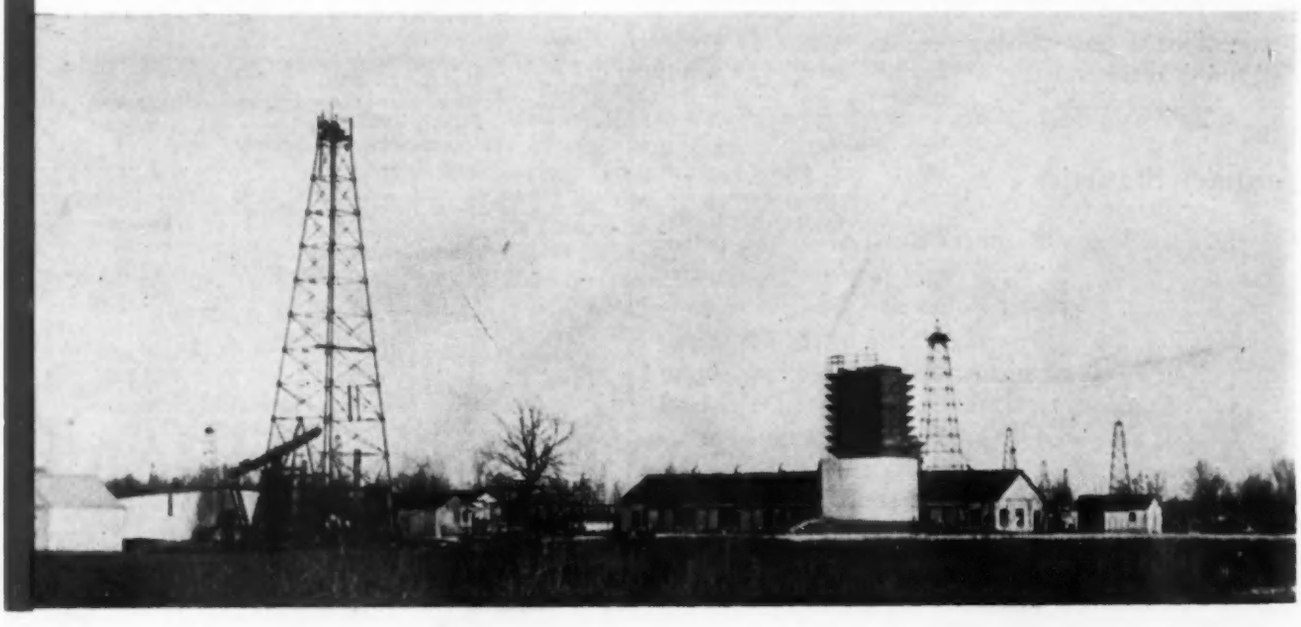
Oklahoma legislators also are searching for more equitable means of establishing proration allocations. It has been suggested they adopt a bill including well spacing or drilling units as the basis. This bill also would require that porosity, permeability and other sand factors be considered. Page 11.

Drilling Up

DRILLING during January shows an increase of 77 percent over the same month a year ago as shown by new wells reported from the principal producing states. Texas, Kansas and Arkansas more than doubled their figures of a year ago and only Louisiana is behind in the comparison. Bulk of the work continues in Texas where last week's addition of 444 permits brought the total for the year to 1080 for the state, while all areas total 537 for the week and 1493 for the month.

Completion reports account for 200 new oil wells, 27 gas wells and 94 failures, for a total of 321. Estimated initial production added was 606,144 barrels, of which 102,984 was in Oklahoma and 442,210 in Texas, the former having 34 completions and the latter 172. (See tabulation Page 44.)

The first casinghead gasoline plant in the Porter, Michigan, field is Apex Gasoline Company's which has just been put in operation.



Continued Stability Promised

JACK LOGAN
Associate Editor

Optimism prevails despite hot oil increase, as new federal oil shipping control is in prospect. State enforcement in Texas is fairly successful, although complicated by court actions. California markets are proving immune to Midcontinent disturbances.

DESPITE an increasing volume of hot oil producing and refining in East Texas and an accompanying unsteadiness of refined oil prices east of the Rockies, there is a general leaning toward optimism in the oil control matter and in the general oil situation.

Failure of the industry to become greatly alarmed over recent gradual weakening of enforcement in East Texas has resulted largely, it appears, from the general anticipation that the Connally bill will shortly become law. The bill has been approved by the United States Senate, and is generally expected to pass also in the House, where it was being considered last week by the commerce committee.

The Connally Bill

The Connally bill was being looked upon with confidence because it represents basically a measure of proved merit in combating hot oil. If passed, it will reinstate the federal tender board, to control interstate shipping of hot oil. Such a board, operating under Section 9 (c) of the NIRA, was getting remarkably effective results until the section was invalidated early in January by the Supreme Court. Aside from regulating interstate oil movements, the board was also giving valuable assistance to state authorities in their similar control of intra-state commerce.

State Control Efforts

WHILE federal assistance, through the Connally bill, was in prospect, the Texas oil control authorities were carrying on a determined and at least partially successful campaign to keep conditions stabilized until the bill could be enacted.

In the state's efforts, an especially important role has fallen to the lot of the new Texas attorney general and his department. Threatening to upset the railroad commission's shipping control program there have been numerous court actions, and the attorney general and his men have had their hands full handling the cases.

The state is endeavoring, with fair success, to prevent either interstate or intra-state shipping of questionable crude or refined oils. Toward that end, the state has obtained temporary restraining orders, through which a federal district court forbids railroads to move untendered oils either interstate or intra-state. The railroads will remain so restrained until further court hearing in the cases.

THOSE restraining orders against the railroads have limited untendered oil movement largely to trucks. But difficulties have arisen for the state through suits by which numerous companies and operators have sought exemptions from the commission's shipping control program. (There has not been any attack against the general program itself or the law on which it is based.)

The seeking of exemptions has been on the grounds products made prior to December 10 should be permitted to move without tenders, since the commission's present tender requirements did not become effective until that date.

Complications in Texas Courts

In those efforts toward moving oils without clearance papers, a confused and complicated situation has arisen. On the one hand, several district courts of the state have granted temporary restraining orders against the railroad commission, prohibiting it from requiring tenders on material held prior to December 10. In conformity with the state district court findings, the federal district court amended its restraints on the railroads to permit movement of material involved. But almost simultaneously, the Texas attorney general's department went to a Texas court of civil appeals, and counteracted the district court's orders. The appeals court granted stay orders, first in two cases, then in others, preventing shipment of the oil that had been released for movement by the lower courts. In that appeals court, at Austin, the cases were set for further hearing February 2, to determine if the state authorities

would be further upheld, through replacing of the temporary restraining order with temporary injunctions.

IN the meantime, during the court complications, it was understood that considerable material originally involved had made its way successfully into commerce, beyond impediments. Also there were several additional orders from the state district courts setting free more untendered products, principally fuel oil and crude tops, on contentions of East Texas operators that special circumstances entitled the oils to exemption from the tender requirements. After a considerable number of such restraining orders had been issued, however, a Texas court of civil appeals stayed one of the orders, and ordered a district court judge to show cause February 13 why he should not be prohibited from issuing future similar orders without hearing.

Hot Oil Volume on Increase

THE confustion that resulted from the court developments apparently encouraged the hot oil merchants of East Texas to increase their activity. At any rate, the output of hot oil was indicated to have risen to about 45,000 barrels daily, from 30,000 or 35,000 barrels per day a week previously.

There were in operation in the district somewhat over 25 refineries, and the number was on the increase. The presumption was that a substantial proportion of the plants were processing illegally produced crude, altogether or partially.

Tank truck movement of refined products, principally gasoline, was also on the increase, despite special efforts of state authorities to combat illegal trucking activities. Cooperating with the railroad commission in the problem is the Texas highway patrol, which recently increased its force in East Texas. While the trucks have been moving the gasoline to markets within Texas, the heavier ends, including fuel oil, and so forth, remaining after manufacture of hot gasoline, have been run largely to storage. While some of the storage is steel, much of the material was going to earthen storage, in defiance of prohibitions of the railroad commission.

Markets Depressed in Texas

SINCE much of the illegal gasoline of East Texas has been going to market within the state, Texas has been bearing itself the brunt of market instability engendered by the illegal operations. For weeks, hot gasoline moved by trucks has been leaving East Texas plants at around two cents a gallon. The material qualified for tenders and rail shipment has been commanding much better prices in the meantime.

The tendered gasoline last week was bringing East Texas refiners about an eighth-cent a gallon more than in the previous week, due apparently to some clearing up of the situation in which it had been threatened that large quantities of untendered material would be dumped on the markets. The new prices of third, standard, and premium grades U. S. motor fuel in the district were 3½, 4, and 4½ cents a gallon.

Retail gasoline prices continued depressed in areas in Texas within convenient trucking distance of the East Texas field. In Houston third grade slumped several cents to 11 cents a gallon, including the five-cent taxes. Even lower prices had been prevailing in Dallas and Fort Worth.

Oil Law Enforcement Bolstered

WHILE there is promise of improved oil control through passage of the Connally bill, there have also been other developments, two in particular, that also will possibly result in some tightening up of East Texas control. One involves creation of additional state courts, courts, to improve handling of oil control cases. The other development involves recent aggressiveness of federal government's revenue department in checking up on payment of the national government's one-cent tax on gasoline.

Bills finally have been passed in both the House and Senate of the Texas legislature, creating three additional district courts in East Texas and extending the term of a court which would have been discontinued shortly.

The federal government's gasoline tax drive has resulted in the indictment of several East Texas refiners on charges of evasion of the tax. The federal government, through the internal revenue department, has also secured tax liens, in substantial sums, against nearly a dozen crude oil topping plants in East Texas, because of alleged failure to pay taxes on large quantities of gasoline during the past year.

Evasion of the one-cent per gallon federal tax on gasoline is punishable by heavy fines and imprisonment.

California Conditions Favorable

WHILE the markets east of the Rockies have been adversely affected by the weakening of East Texas control since the Panama-Amazon decision early in January, the situation on the Pacific Coast has not been affected. In that region strong markets prevail, as has been the case for several months. There was around the opening of the new year agitation among independent producers seeking advance of crude oil postings, although there seems to be but small hope at present for realization of such an increase. Gasoline prices have not lost any ground for several months, and the fuel oil market continues strong.

For the stability of the California gasoline market, credit goes largely to the marketing sales agency that operates under oil code sponsorship. Independent refiners with surplus material are enabled through the agency to sell such gasoline at about seven cents a gallon. The success of the marketing agency is possible, in turn, because of effective restraint of crude oil production.

Propose Proration *to Oklahoma Legislature* Based on Drill Units

Oklahoma City.—Oklahoma oil men are finding that the fifteenth session of the legislature is one which will bear close watching since so many important proposals are being made in connection with the oil industry's affairs. Among the proposals, and one which likely will become law at an early date, is the increase of gross production tax from three to five cents per barrel. Of equal importance are the efforts being made to amend House Bill 481 (Chapter 131, O. S. Laws 1933) the law under which proration operates. Some operators brand some of the proposals as veiled attempts of members of the legislature to further their own interests. Others hail the same bills or proposals as heroic attempts to obtain equity in the allocation of production.

One proposal offered during the week in the House of Representatives, "An act amending sections 2, 3, 4, and 6 of House Bill 481, providing for the spacing of oil wells in the common sources of supply in this state, more effectively preventing waste and adjusting the correlative rights of producers of oil and royalty owners in such common sources of supply, and for other purposes, and declaring an emergency," is said to have the backing of a large number of the oil companies. The high point in this bill is the proposal of a well spacing or drilling unit plan by which it is believed a more equitable method of arriving at potentials and allocation of production may be obtained. Section 3 of this proposal which would amend section 4 of the act, reads as follows:

Section 3. Section 4 of said Act is hereby amended by adding thereto the following sub-sections:

(a) To prevent and to assist in preventing the various types of waste prohibited in said House Bill 481, or any of them, said corporation commission, by orders, rules and regulations, made in conformity with the procedural requirements of said House Bill 481, shall have the power to establish well-spacing or drilling units in any source of supply discovered after this Act shall become effective, or existing when this Act shall become effective, where the correlative rights of the producers of oil and royalty owners therein are such that their rights will not be unreasonably prejudiced or impaired by the well-spacing or drilling unit established for the particular source of supply by said commission.

(b) In establishing a well-spacing or drilling unit for a common source of supply hereunder, the acreage, shape, and form of such unit shall be determined upon the basis of evidence offered before the commission and include, among other things, the following: (1) The depth of such producing wells as may already have been completed in the common source of supply; (2) The thickness, porosity, and permeability of the producing sand in said source of supply; (3) The nature and characteristics of the reservoir energy found therein; (4) The formations encountered in any wells then drilling in said source of supply; (5) cores taken from said source of supply; (6) The history and producing characteristics of wells in other sources of supply producing from the same or similar formations; and (7) Any other available geological or scientific data pertaining to said sources of supply which may be of probative value to said commission in determining the proper spacing and well-drilling unit, with justice and euqity to the producers of oil and royalty owners interested therein; Provided, that in making an order under this sub-section, a plat showing the surface area included therein and the size, form, and shape of the spacing or drilling unit established shall be attached thereto; and, subject to the provisions hereinafter appearing, said order shall direct that all wells drilled in said area shall be located as near the center of each spacing or drilling unit as may be.

(c) If a spacing or drilling unit shall have been established for a source of supply by said commission, as above provided, and if, thereafter, a producer of oil or operator interested therein, owning an entire unit, shall drill more than one producing well to the same producing horizon on said unit, then, under the procedural requirements of said House Bill 481, said commission shall enter an order holding the total production of said unit to the average of the daily capacity of all producing

Confusing Injunctions *Are Injected Into Texas* Oil Control Situation

Austin, Texas.—A series of confusing injunctions was injected into the oil control situation here last week, with orders issuing from state district and appeals courts, as well as from the federal district court.

On Monday the Third Court of Civil Appeals granted stay orders preventing the movement of oil released by injunctions issuing from the three district courts in Travis County. The first orders applied to only two cases but similar orders were issued in other cases as rapidly as the records could be transcribed and the appeals perfected.

These orders provided that "application for temporary injunction set for hearing at 9 a.m. Saturday, February 2, 1935; temporary restraining order will issue, restraining appellee (the oil company) from moving or transporting, or causing to be removed or transported, any of the products involved in this suit in violation of the railroad commission's order of December 5, 1934, pending hearing of said application for temporary injunction. The parties hereto may apply for a change of date of such hearing."

Four principal points were offered by Assistant Attorneys General Archie D. Gray and Dick Holt in their appeal from the district court orders allowing the oil to be run. These contentions were to be presented at the hearings set down for Saturday, February 2.

1. That the processed oil order of the commission promulgated on December 4 operates prospectively in that it seeks to govern and control the movement of products and movements that will occur after the order has become effective.

2. That the processed oil order is reasonable and is a valid exercise of the police powers of the state within the jurisdiction of the railroad commission in that it requires the filing of certain data and information as a condition precedent to the right to move products.

3. That even if said order does not operate retrospectively in products of crude oil in being at the effective date of the order, nevertheless the order is valid because being an exercise of the police powers, it is not hereby rendered unconstitutionally void since the exercise of the police powers may validly operate retrospectively in matters and things in being (in existence).

4. That the trial court in granting

(*Continued on page 48*)

wells drilled thereon to the same producing formation.

(d) If two or more separately owned tracts are embraced or partially embraced within an established spacing or drilling unit, any producer of oil or operator having the right to drill one of said separately owned tracts may do so: provided, the allowable production from said separately owned tract shall be such proportion of its daily capacity as hereinafter determined as the acreage of said separately owned tract bears to the entire acreage of the spacing or drilling unit upon which it was drilled. If, under the conditions first recited in this sub-section, an oil producers owning a majority or more of the acreage included in a spacing unit shall elect to drill a well on his acreage, he shall give the other producers owning acreage in the unit fifteen (15) days' written notice of his intention so to drill, and any of said producers within said 15-day period, by contributing to the producer drilling said well, such proportion of the reasonable cost of drilling, equipping, completing and operating the same as the acreage of the contributor bears to the total acreage owned by producers who are participating in the cost of the well, and any such other producers so contributing shall thereupon be entitled to a corresponding share of all working interest production from said well; Provided, that each contributor shall pay to the oil producer drilling the well, under the provisions hereof, his share of all reasonable costs thereof, excepting operating costs, before the producer drilling said well shall set his sub-surface casing. Any royalty owner, or owners, whose lessee shall contribute to the cost of a well, as provided in this section, shall share in the royalties from the lease covering the lands of the producer drilling the well in a proportion corresponding to that of his lessee.

(e) The commission, upon proper application and proof, and in conformity with the procedural requirements of said House Bill 481, shall have the power to enlarge and extend the boundaries of a common source of supply when oil developments, or the trend of such developments, shall indicate that an additional area should be included therein. If a producer of oil shall hold a unit on the edge of a producing common source of supply of a character generally known and understood in the oil industry as "edge" acreage, upon application, notice, and hearing before said commission, as provided in said House Bill 481, said edge owner, by order of the commission, may be given the privilege of drilling a well on said unit closer to the boundary line of an adjoining unit or units than in the center of his unit; And, upon the completion of said well as a producer, and at a supplemental hearing, the commission shall determine the allowable production from such edge well, taking into account the acreage of the unit which is probably productive and such other facts as should be considered to adjust and equalize the correlative rights of the edge owner and his royalty owners with the correlative rights of the owners of adjoining units and their royalty owners, and with all other producers of oil and royalty owners in the particular source of supply.

Employment Increased 46.4 Percent in Oil Business

Washington, D. C.—Retention without change of the present working hour maxima of the oil code was advocated January 31 by H. H. Anderson of St. Louis, speaking for the Planning and Coordination Committee at hearings conducted by the National Industrial Recovery Board on the subject of employment provisions in codes.

While the oil code comes under Secretary of the Interior Harold L. Ickes as Oil Administrator, while all other codes are under the jurisdiction of the National Recovery Administration, Anderson was invited by the board to speak because of the importance of the industry and the widespread publicity which has been given the code and operations thereunder.

Analyzing the effects of the code, Anderson reported that the average hours in oil field operations had been reduced 34.4 percent between May, 1933, and May, 1934, which, with an increase in drilling activity, has increased direct employment of wage earners by 46.4 percent. Including indirect employment on rig-building and drilling operations by the contractors, the increase was 77.8 percent.

Limitation of hours has, if anything, improved the regularization of employment although, it was pointed out, the effort of the industry to prorate production has unquestionably been the more effective cause.

The effect of limitation of hours and the code wage requirements has been to increase the hourly rates of oil field wage earners by 54 percent, the board was told. The restrictions of the code are estimated to have increased the payrolls of the industry about $230,000,000, or 17.3 percent, a year, and based on an average sale of about 17,200,000,000 gallons of gasoline the increased direct labor cost of the product delivered to the ultimate consumer has been about 1.33 cents per gallon.

Code evaders, rather than economic conditions, were shown by Anderson to have brought about a bad situation with respect to corporate earnings.

Answering a question as to the effect of increased costs resulting from code compliance, he explained that until January 1, 1930, the industry as a whole showed satisfactory profits but "an analysis of the earnings of those major companies since that date demonstrates that, whatever may have been the case previously, the rate of return on the $4,600,000,000 net worth is amazingly and distressingly small.

"Data compiled by Standard Statistics Company relative to the above referred-to representative group of major companies show that the rate of return on the combined net worth for the year 1929 was 8.39 percent profit, whereas in the three succeeding years the rate of return was 2.5 percent profit, 2.25 percent deficit and 0.36 percent profit, respectively. For the year 1933 the average rate of return was 0.87 percent profit.

"For the first six months of 1933, all prior to the promulgation of the code, the rate of return was two percent deficit; however, for the second six months, of which four followed the date of promulgation of the code, the rate of return was 2.87 percent profit. For the first half of 1934 the rate of return fell off again to 1.13 percent profit; and it is likely that the last half of 1934 will show substantial losses

Refiners Asked to Meet With Ickes

Washington, D. C.—Representatives of the industry were this week called by Oil Administrator Harold L. Ickes to meet with members of the oil administration February 11 to discuss refining operations and outlook for the three months beginning March 1.

The call for the conference was issued January 31 on the recommendation of the Planning and Coordination Committee, which explained that the members of the committee and others desired to discuss the required gasoline inventories and demand in each of the refinery districts, as well as stocks and probably inter-district shipments of gasoline during the three-month period.

NEVER TOO COLD FOR MOORE SERVICE

MOORE SERVICE FOR FEBRUARY

- INTELLIGENT NEGOTIATION
- SATISFACTORY FULFILLMENT
- EXCELLENT PRODUCT PERFORMANCE

MOORE BAND WHEEL SERVICE INCLUDES LONG LIFE WITH MINIMUM BELT WEAR.
Write for Information.

LEE C. MOORE & CO. INC.
TULSA · PITTSBURGH
Dallas Houston Henderson Kilgore Longview Midland Odessa
Pampa Wichita Falls, Texas; McPherson Wichita, Kansas
Stocks in all active fields

STEEL DERRICKS SINCE 1908

Moore PUMPING *Equipment*

DERRICKS SUBSTRUCTURES HANGERS WALKING BEAMS SAMSON POSTS JACK POSTS BULL AND CALF WHEEL POSTS
WHEELS PITMANS IMPROVED BEARINGS CROWN BLOCKS PORTABLE PUMPING UNITS CLEAN-OUT MACHINES WINCHES

because the average retail selling price per gallon fell off from an average of 13.9 cents for the first half of 1934 to 13.3 cents for the last half of 1934. On November 1, 1934, it was 11.72 cents.

"This change in profit condition is principally due to the rapid migration of gallonage from the company-operated service stations to the open and secret cut-price stations operated by many independent dealers, tracksiders and farm cooperatives, whose fear of threatened price fixing or code enforcement during the first few months of the code held them in check," he charged.

Anderson estimated that their price-cutting tactics have increased the percentage of this group from five to 25 percent of the total business in metropolitan and agricultural areas.

Discussing the question whether changes should be made in the maximum hour provisions of the code, Anderson explained "we would hesitate to recommend any increase in code hours generally because of the probable social consequences. With respect to other possibilities we can speak for our code only. The statistics presented show that this industry has reestablished employment of those regularly attached to it at levels 7.7 percent above the abnormal year 1929. Clearly there is no social nor economic justification for a further decrease in the working hours of our code. Even in service station operations, where a work week of 48 hours is permitted, employment is at a level 18 percent above 1929."

Interstate Oil Compact Bill Passed in Oklahoma

Oklahoma City.—The Oklahoma Senate on Tuesday afternoon, January 29, unanimously passed the oil states compact bill proposed by Governor Marland at the conference of oil producing states held in Ponca City on December 3, 1934, and further discussed in a similar conference on January 3, 1935. The Oklahoma bill provides that the state shall be represented at a conference or conferences at which a fact finding agency would be named to study problems of the industry as experienced in the various oil producing states. This agency, among other things would gather information on market demand, petroleum and petroleum products in storage, potentials and other matters pertaining interstate allocation of domestic demand. It was believed that a call would be issued late in the week for a third conference of the governors of the oil producing states.

New Tender Order Issued by Commission

Austin, Texas, Feb. 1.—The Texas Railroad Commission today issued a revised processed oil tender order effective immediately. The new order is changed only in that "the findings of fact by the commission" are embodied in the order, according to Chairman E. O. Thompson.

The revised clauses recite that the order is issued based on evidence presented at the hearing on November 26, 1934, at which it appeared that unless some action was taken waste of natural resources would result. After considering various phases of the factors governing "the production, transportation, storage, handling, refining, reclaiming, processing, treating and marketing of oil" the order was issued governing the "transportation and handling of products."

Chairman Thompson would not reveal any other reason for the revision than that the commission felt that these findings of fact should be included. However, it is supposed that these were added to strengthen the order.

Allred Empowered to Attend Compact Conferences

Austin, Texas.—W. J. Holloway of Oklahoma, representing Governor E. W. Marland on oil compact matters, was expected in Austin Saturday to discuss this question with Governor Allred. Last Friday the governor sent a message to the legislature requesting that he be authorized to delegate to someone the right to attend these conferences, if they are held in other oil producing states. The legislature, complying with the governor's request, passed a resolution in which they resolved that "That the Governor of the State of Texas, or in the event of his inability to act, his duly appointed representative or representatives, is hereby authorized to appear for and represent the State of Texas at a conference of the representatives of the oil producing states for the purpose of formulating, discussing and recommending a form of compact between said states to accomplish the conservation of petroleum and natural gas and prevention of physical waste of these natural resources, without price-fixing, and without the creation or perpetuation of monopoly or regimentation, such compact, subject to the consent thereto by the Congress of the United States, to become binding upon this state only upon its approval by the legislature of the State of Texas."

The legislature also required that the conferees sent by Texas report back to the legislature, as suggested by the governor in his message.

Panhandle Gas Bills On Floor Tomorrow

Austin, Texas.—The first hearings on the various bills designed to control gas waste in the Panhandle and other sections of Texas have been tentatively set down for Tuesday, February 5.

Several engineers and other experts on gas control and other phases of the industry are expected to appear before the committee during an extended series of hearings.

Committee Votes Favorably On Gas Carrier Bill

Austin, Texas.—The House Committee on Oil, Gas and Mining has voted favorably on a bill by Representative Tennyson to make common carriers of all gas pipe lines operating in Texas. The vote was nine to eight.

Under provisions of this bill, proponents of the measure contend that municipalities would be able to go into the gas fields, purchase their production and have it transported over the carriers to the cities at costs far lower than are now in effect. Railroad commission engineers contend that one effect would be to increase the price paid for gas at the well.

Gas company representatives appearing before the committee stated that the act would threaten to disrupt the entire industry in Texas, and that higher prices to consumers would result.

893,302,000 Barrels Run to Stills Last Year

Washington, D. C.—Receipts of crude oil at refineries last year aggregated 400,381,000 barrels, of which 367,326,000 were domestic and 33,055,000 foreign, according to figures compiled January 31 by the Bureau of Mines of the Interior Department.

The figures showed that 495,122,000 barrels were produced within the state in which refined, 123,282,000 barrels were imported from Oklahoma and 170,712,000 barrels from Texas.

Crude runs to stills for the year were placed at 893,302,000 barrels and fuel and losses amounted to 4,320,000 barrels, the bureau reported.

At the close of the year stocks of crudes in the hands of refiners totaled 63,930,000 barrels.

10 YEARS IN REVIEW

EXTENSIVE SHOPS
A RECORD OF 80,000 WELLS CEMENTED
MODERN TRUCK EQUIPMENT
WE'LL GET THERE SOMEHOW
PRACTICAL LABORATORY AND RESEARCH FACILITIES

1924 1934

● Having completed "A Decade of Progress," as a corporation, it is appropriate that Halliburton should present a brief account of its service to the industry.

● Through its highly trained and experienced cementing organization, Halliburton has added to the productive life and safeguarded the investment involved in more than *80,000 wells* . . . Through constant research, it has perfected and made available to the industry, facilities which play a vital part in modern drilling practice. Among them are:

● MULTIPLE STAGE CEMENTING—Permits, in one continuous operation, the placing of two or more batches of cement at predetermined levels behind casing. Reduces pump pressure 50%.

● FULL-HOLE CEMENTING—Accomplishes an aim as old as the industry—greater drainage surface without added cost.

● HOWCO FLOATING EQUIPMENT—So coordinated in design with cementing procedure as to give maximum assurance of a successful job.

● HOWCO TESTER—Provides a dependable test of productivity without setting casing.

An interesting booklet, titled "A Decade of Progress," will soon be off the press. May we reserve a copy for you?

HALLIBURTON OIL WELL CEMENTING CO.

DUNCAN, OKLAHOMA

MEN IN THE INDUSTRY'S NEWS

R. B. PRINGLE, vice president of Tide Water Oil Company, with headquarters in the company's Tulsa office, was visiting the Houston office during the past week on business, after inspecting the company's holdings in the Gulf Coast and East Texas.

VIRGIL HICKS, for many years with Laurel Oil & Gas Company in Tulsa, has resigned to become an assistant to Ed H. Moore. Moore is the owner of a large amount of acreage and royalty in the new Fitts pool of southeastern Pontotoc County and is one of the state's most active independent operators.

ALLMAND M. BLOW, vice president and general manager of Amerada Petroleum Corporation, was called to New York City on Friday, January 25, by the death of his mother, Mrs. A. A. Blow.

O. K. WING, treasurer of Phillips Petroleum Company, is reported making satisfactory improvement following an operation at Johns Hopkins Hospital at Baltimore, Maryland.

H. E. (DADDY) STOCK, well known Rocky Mountain oil operator, who drilled the discovery well in the famous Salt Creek light oil field in 1908, and who underwent an operation for amputation of his right leg on January 10 at the Glendale sanitarium in Glendale, California, is reported convalescing nicely. He retired from active work in the oil industry several years ago. His son, Paul Stock of Cody, Wyo., is an independent operator in the Oregon Basin field, where he has several producing wells, and started the first successful use of rotary drilling in the Rocky Mountain states.

W. G. SKELLY, president of Skelly Oil Company, was a recent speaker before the Hutchinson, Kansas, chamber of commerce.

H. K. BROWNING, sales manager of The S. M. Jones Company, has moved his family to Tulsa where the sales department of the company now is located in enlarged quarters in the McBirney Building. The field organization of the company is being reorganized and enlarged. Mrs. Estelle Flud for several years in the Tulsa office continues in the position of office manager.

JAMES S. HUDNALL of Tyler, Texas, was the featured speaker at the February 1 meeting of the Shreveport Geological Society, speaking on "Compressibility of Reservoir Rocks in the East Texas Field and Its Relation to the Production of Oil."

HARRY E. MILES has been appointed chief engineer of the Texas Railroad Commission in charge of enforcement in the East Texas field. The appointment became effective February 1. Miles succeeds Captain E. N. Stanley, resigned. Miles had been Captain Stanley's assistant during the past year and has been in the East Texas field two years.

LUTHER BELEW, deputy supervisor of the Texas Railroad Commission, has been placed in charge of proration in West Central Texas, with headquarters at Eastland. He relieves Omar Burkett, who has been transferred to Austin headquarters to handle production and tender reports.

KENNETH L. STONE, chief accountant for the Petroleum Administration Board, Washington, D. C., addressed a special meeting of the Louisiana Division of the Independent Petroleum Association of America, held in Shreveport, January 29. He explained the method and purpose of the federal government's collec-

APPOINTED CHAIRMAN of Labor Sub-Committee

The Planning and Coordination Committee has announced the appointment of Dr. E. R. Lederer as chairman of the Labor Sub-Committee to replace H. H. Anderson, who resigned recently to return to Shell Petroleum Corporation at St. Louis. Dr. Lederer has been connected with the petroleum industry for many years as a refining engineer and at present is vice president in charge of refining and natural gasoline manufacturing for Texas Pacific Coal & Oil Company, with headquarters in Fort Worth, Texas. Dr. Lederer, a native of Austria, was with Vacuum Oil Company in Galicia and Roumania from 1905 to 1912, when he came to the United States as assistant to the chief chemist at the Bayonne refinery of Standard Oil Company of New Jersey. Two years later he became chief chemist and assistant general manager of Atlantic Refining Company's Franklin, Pa., plant. In 1916 he joined Galena-Signal Oil Company and constructed the first refinery on the Houston Ship Channel. From 1919 to 1921 he was manager of the oil department of Atlantic Gulf Oil Corporation with headquarters in New York. He constructed several foreign refineries during this time. From 1922 to 1925, he was vice president of Louisiana Oil Refining Corporation at Shreveport, La., and constructed the first vacuum plant for salt dome naphthene base lubricating oils. Since 1925, he has been with Texas Pacific Coal & Oil Company, where he has been instrumental in the development of a process for manufacturing zero coal test paraffin base lubricating oil for airplanes and automobiles. Dr. Lederer is a member of many petroleum societies and prior to his appointment as labor chairman had been active in the operation of the program and refining committee of the Planning and Coordination Committee. He will devote his full time to his new position, which he assumed on January 28.

DR. E. R. LEDERER

We invite you to call us—station to station—whenever we can be of Service to you.

"You Can Get It from Bridgeport"

ADEQUATE SERVICE
WITHOUT EXTRAVAGANCE
Stores and Stocks in active districts of Kansas, Oklahoma and Texas

A telephone call will bring anything needed, quickly and economically

NATIONAL TUBE COMPANY
CASING — LINE PIPE — TUBING — DRILL PIPE

AMERICAN WIRE LINES
ROTARY AND CABLE

JENSEN JACKS and GEARED UNITS

BAROID and AQUAGEL DRILLING MUDS

JONES SUCKER RODS

ALLIS-CHALMERS ELECTRICAL EQUIPMENT

FITTINGS — SUPPLIES SPECIALTIES

ROCK BITS, CORE BITS, TOOL JOINTS, VALVES

BEAM HANGERS and PUMPING EQUIPMENT

BRIDGEPORT ROTARY TOOLS
DRILL COLLARS, ROTARY REAMERS, OVERSHOTS, FLOATS, ETC.

SWAN Patented UNDERREAMERS
SALES, RENTAL AND REPAIR SERVICE

BRIDGEPORT BELTING and ROTARY HOSE

CABLE TOOLS OF ALL KINDS

LINK-BELT ROTARY CHAIN

COMPLETE RENTAL TOOL SERVICE

BEST GRADES USED CASING and LINE PIPE

STORES and SALES OFFICES at

•We Offer A Complete Oil Field Supply Service

•• *Your regular Bridgeport Salesman receives full credit for all telephone orders.*

BRIDGEPORT
MACHINE COMPANY
MANUFACTURERS DISTRIBUTORS
OIL DRILLING-FISHING AND PRODUCTION EQUIPMENT
GENERAL OFFICE AND WORKS, WICHITA, KANSAS

HOUSTON · TULSA · DALLAS · OKLAHOMA CITY · PAMPA · McPHERSON · RUSSELL AND OTHER ACTIVE MID-CONTINENT AND GULF COAST POINTS

MEN IN THE INDUSTRY'S NEWS

(*Continued from Page 16*)

tion of statistical data dealing with operating and administrative expenses and income in the survey now being made of the cost of producing crude in 1934. Sixteen major points are covered in the 1934 survey questionnaires now being sent to about 3500 oil men, he said.

ALF G. HEGGEM, Oil Well Improvements Company, Tulsa, has been touring Texas oil centers for the past two weeks. Last week he was in Houston.

GROVER C. POTTER, geologist, of San Antonio, has moved to Mission, where he will become associated with D & D Oil Company as chief of that company's geological and land department.

ROBERT E. NELSON, JR., geologist and lease buyer for Stanolind Oil & Gas Company in West Texas, has been transferred from Midland to Houston, where he will devote his entire time to land and lease work. The vacancy in the Midland district office will be filled by the transfer of Frank Faulk, who has been stationed in the Gulf Coast area.

S. H. CASTEEL, Fort Worth consulting geologist, has been elected president of the Fort Worth Geological Society, succeeding Paul L. Applin. Alan Bruyere, division geologist for The Texas Company, and C. D. Cordry, petrographer for Gulf Production Company, were elected vice president and secretary-treasurer, respectively.

L. E. TROUT, geologist of San Antonio, has moved his office from the Bedell Building to 1011 South Texas Bank Building, where he will continue his consulting work. He is associated with John R. Sterrett, geophysical operator.

RUSH GREENSLADE, vice president and manager of Gypsy Oil Company, sailed from New York on Thursday, January 31, for a five weeks' Mediterranean cruise.

GRADY KIRBY has opened an office at 707 Jefferson Street in Beeville. He was formerly district geologist for Sinclair Prairie Oil Company, but resigned from that position to go into independent work.

PAUL L. MEADERS, independent operator of San Antonio, recently returned from a trip to Mexico City, Mexico.

LICENCIADO PRIMO DILLA MICHEL, former secretary of the national economy of Mexico, will direct affairs of Petroleos de Mexico, S.A., the government formed organization will begin to function at an early date, allowing the government and Mexican citizens to participate on a stock ownership basis in development of the nation's crude reserves. Senor Don Michel's articles on the Mexican petroleum industry, prepared when he was secretary of the national economy, have appeared in The Oil Weekly from time to time.

H. W. GALEY, formerly in the Oklahoma City district, has been transferred by Gypsy Oil Company to McAlester, Oklahoma, where he will act as land man.

GEORGE A. RAY, SR., is head of the recently formed Venture Oil Company of Pettus, headquarters in Pettus, Texas. He is one of the major land owners in the Pettus field. Also in the company are C. H. Ray and George B. Pickett.

R. R. HOSKINS has been appointed representative of Union Wire Rope Corporation in the Gulf Coast territory. He will make headquarters at Houston. H. R. Gruber, vice president of the company, recently toured the area with Mr. Hoskins

L. A. NORDAN, John G. Morris and C. E. Jamison have formed American Texas Oil Company of Laredo. The company is developing large gas properties in the Lopena field of Zapata County.

G. W. (BILL) DREYER of the Gaso Pump and Burner Manufacturing Company of Tulsa is now located at his new address in Houston, Texas, 2325 Wroxton Road.

DIED

DAVID A. UPHAM, 71, president of Brazos River Gas Company, owner of oil and gas properties in West Central Texas and a natural gas pipe line system, died January 31 in a Fort Worth hospital following an operation. Although a resident of the United States for 56 years, Upham was a native of Nova Scotia. He entered the natural gas untlity field at Clarksville, West Virginia, and later installed a system at Mount Vernon, Ohio, which is operated by two of his sons, S. P. and J. A. Upham. The Upham interests constructed a natural gas trunk line system known as Northern Texas Utilities Company from Wheeler County section of the Texas Panhandle to Wichita Falls, and in 1929 sold controlling interest to United Gas Company. Funeral services for Mr. Upham are scheduled to be held at Mineral Wells, Texas, where he has resided since 1919.

COLONEL GEORGE BOOTH, well known in oil centers in England, United States and South America, died at Guildford, England, during the fore part of January. He had been ill for some time, suffering from tumor of the brain. During the World War he served with distinction in the British Army, and was later resident manager in South America for British Controlled Oilfields, Ltd., with headquarters at Maracaibo.

LEE ROY HOLCOMB, World War veteran and field employe of Carter Oil Company, died Thursday, January 24, at the veteran's hospital at Fort Lyons, Colorado. Holcomb came to Tulsa in 1909 and made his residence in the Dawson suburb until 30 days before his death when he entered the veteran's hospital. Death was due to pneumonia.

MIKE McNAMARA, 43, former deputy supervisor for the Texas Railroad Commission in North Texas, and more recently a part owner of a producing property in the East Texas field, died January 26 at his home in Fort Worth following a brief illness.

Texas Company Personnel Officials Hold Conference

Houston.—The personnel department of The Texas Company, recently held a three-day conference in Houston with many of the executives of the different divisions present. A. A. Nichoson, manager of the personnel department, New York; S. R. Bumann, supervisor of education, New York; B. H. Anglin, supervisor of compensation, New York; G. A. Miller, supervisor of safety, New York; J. L. Tete, manager of personnel department for The Texas Company of California and V. R. Currie, assistant manager of the personnel department in Houston, were present.

V. R. Currie was in charge of the arrangements for the conference.

Kansas' Future Crude Oil Reserve Status

PART II

ROBERT H. DOTT
Consulting Geologist,
Tulsa, Oklahoma

THIS, the second of a series of three articles discussing the future crude oil supply represented by the State of Kansas, shows the estimated proportion of the state's demand that will be met by present fields, and the amount that must come from pools yet to be discovered. By this process it will be possible to determine the quantities of new supplies that must be discovered if the state is to maintain its position in the national oil picture.

In order for Kansas' oil production to maintain its past yearly average over the next five to 10 years, and to approach the estimated future demand, additional oil must be supplied. The state's possibilities along this line will be discussed in the third and concluding article, which will appear next week.

The first article of the series, which appeared in THE OIL WEEKLY January 21, discussed the history of oil production in the state. It showed consistent discoveries were responsible for Kansas having maintained an annual production of 40,000,000 barrels during the past 17 years.

Future Needs and Visible Supplies

FOR the past 17 years, Kansas was able to produce and market approximately 40,000,000 barrels of oil per year. Table I, Part I, shows that over the 11-year period, 1924-1934, inclusive, this state has contributed an average of 4.6 percent of the total United States production, and its proportion of U. S. demand would be virtually the same.

With the natural decline in the large fields of Oklahoma and Texas, the lack of important new discoveries to offset it, and the readjustment of the hot oil situation, crude oil purchasers will probably turn to Kansas for increased takings, and it is not unreasonable to assume that Kansas' 5.2 percent of the U. S. market in 1934 may be increased to six percent over the next five years.

It previously has been shown[1] in THE OIL WEEKLY that the U. S. domestic demand may be expected to increase during the next few years, and a table was presented to show Oklahoma's proportion of this demand. Using the same figures for U. S. demand, and six percent for Kansas' share, it will be interesting to estimate the state's demand for the next few years, the proportion of it that can be met by present fields, and the amount that must be supplied by new development and discoveries. The estimate of future production from present fields will be discussed in later paragraphs, but the results are summarized in Table VI.

[1] Robert H. Dott, "Discoveries Required to Maintain Status of Production in Oklahoma," Part II, The Oil Weekly, May 7, 1934.

Reserves in Present Fields

Production data on many of the most important fields and districts in Kansas, produced under open-flow conditions, show such regular decline as to permit the satisfactory use of decline curves to estimate the future production. Curves on 11 representative fields were first plotted and projected on logarithmic paper, then transferred to ordinary coordinate paper for reproduction here as Figures 3 and 6. The annual declines, to the end of 1933, not allowing for increases enjoyed by some of the fields, are shown in Table VII.

These data present an interesting comparison in the rate of decline between pools producing from the same and different sands. The fields whose decline is shown on Figure 3 are producing from Pennsylvanian sands, those shown on Figure 4 are principally from Ordovician limestones. Curves on Eldorado and Fairport are shown on Figure 5, the former producing principally from Ordovician limestones, the latter from limestones of the Kansas City-Lansing formations of Pennsylvanian age. Voshell (Figure 6) is producing from the Mississippian "Chat," Ordovician limestones and "Wilcox" sand,

TABLE VI
Estimated Future Consumption and Production

Year	U. S. Domestic Consumption	Kansas' Portion 6%	Production from Present Fields	Needed Additions
1935	960,000,000	57,600,000	71,200,000	.....
1936	1,010,000,000	60,000,000	57,900,000	2,100,000
1937	1,030,000,000	61,800,000	46,500,000	15,300,000
1938	1,050,000,000	63,000,000	37,800,000	25,200,000
1939	1,075,000,000	64,500,000	30,950,000	33,550,000
1940	1,100,000,000	66,000,000	25,450,000	40,550,000

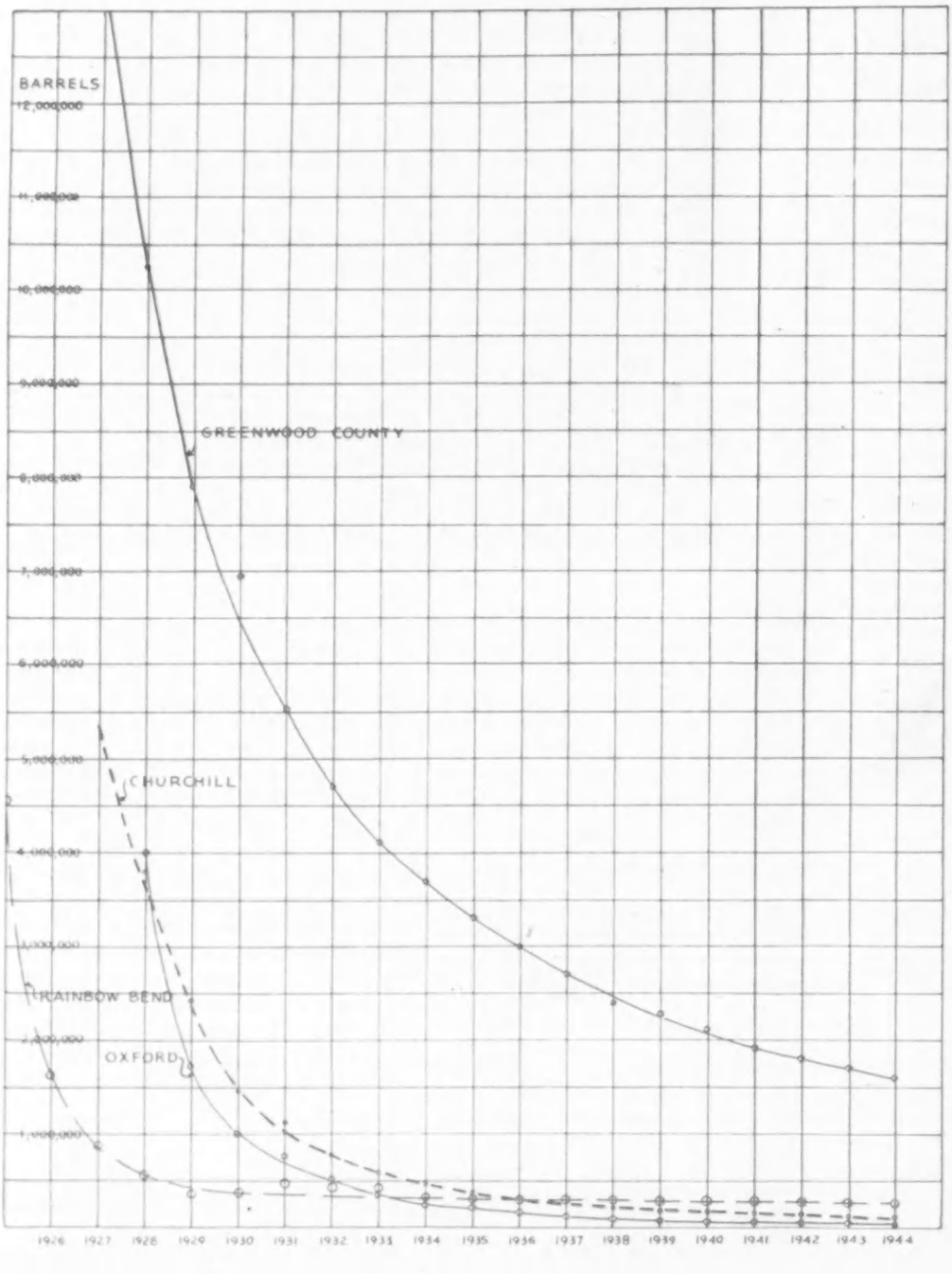
TABLE VII

Percentage Decline in Annual Production of 11 Kansas Fields

Field	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	Average
Augusta	*	15	18	45	12	10	12	20	4	2	10	8	14
Eldorado	21	10	8	17	2	3	1	6	*	*	22	8	10
Greenwood Co.	..	..	*	*	*	1	25	23	13	20	15	12	18
Peabody-Elbing	..	13	30	33	27	11	9	11	8	30	6	8	17
Florence-Covert	..	53	51	23	10	6	34	18	17	9	27	18	24
Rainbow Bend	..	..	..	*	65	40	33	33	*	*	7	8	31
Fairport	..	..	..	*	*	49	38	19	15	8	12	*	23
Churchill	..	..	..	..	..	*	30	36	40	25	29	35	31
Oxford	..	..	..	..	..	..	*	35	42	23	35	29	33
Sedgwick Co.	..	..	..	..	..	..	..	*	10	24	24	25	21
Average	21	22	25	30	23	20	23	22	19	17	19	16	21

These percentages are actual decline of each year's production from that of the previous year, and are therefore, somewhat irregular. The decline curves average up and smooth out these irregularities. An asterisk indicates an increase over the previous year's production.

Below: Figure 3—Production decline curves on three fields and one district producing from Pennsylvania sands

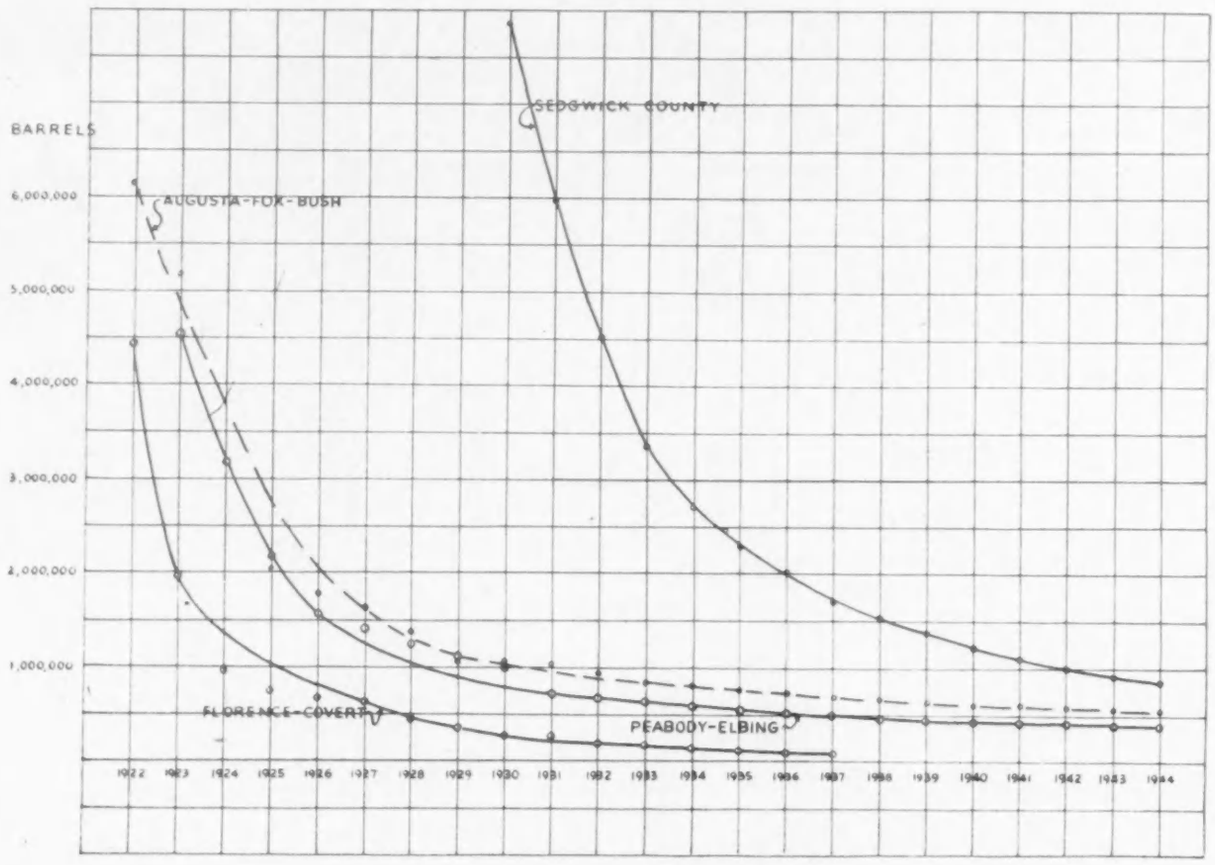


principally the latter, with the "Viola" lime practically in contact with it, and the underlying Silicious lime plugged off.

Oxford and Churchill both are producing from the Stalnaker sand of upper Pennsylvanian age, and equivalent to an important producing horizon in the Tonkawa field, Oklahoma. The curves show a very similar decline, and except for the fact that the first year's decline in the Oxford field is somewhat steeper, exhibit a very marked parallelism.

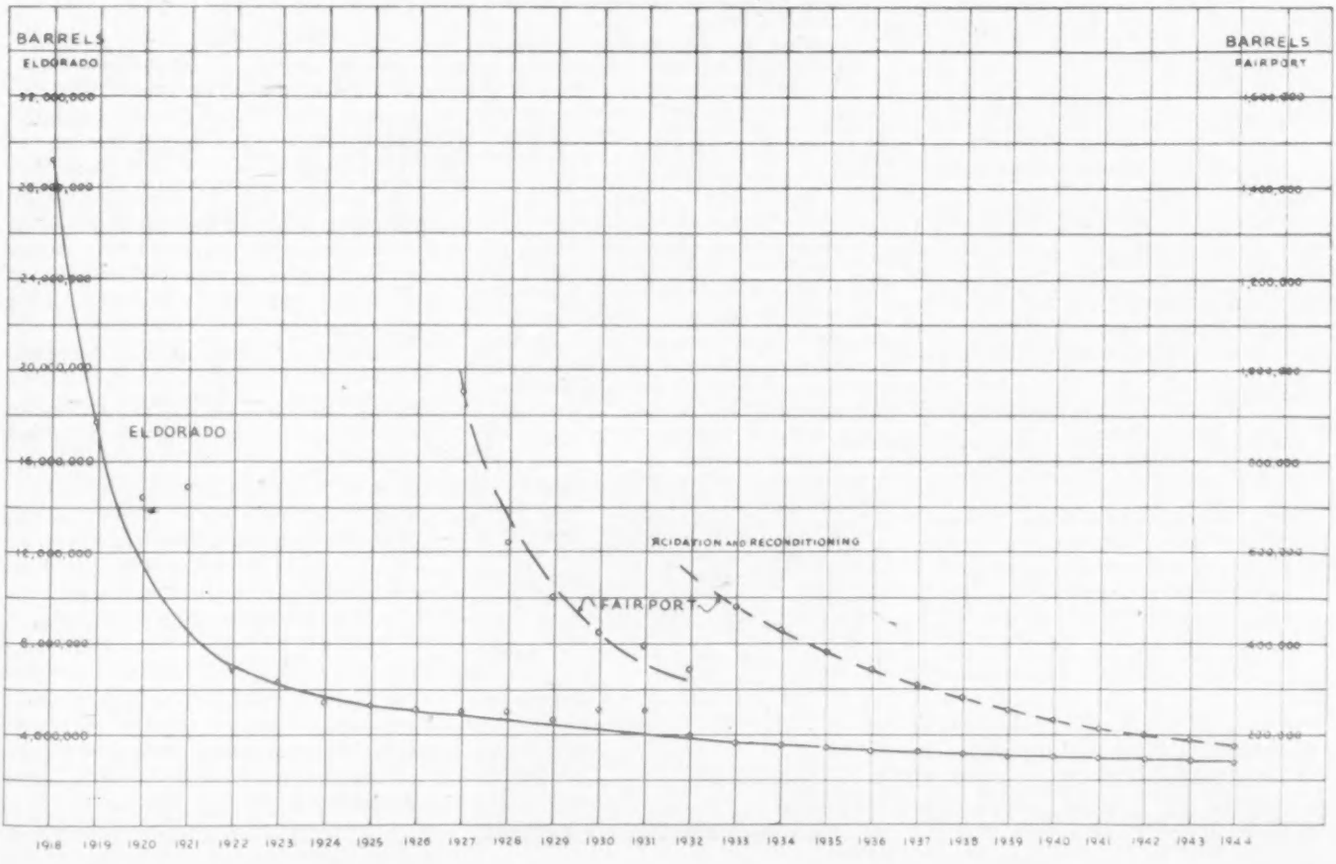
Rainbow Bend is producing from the Rainbow Bend sand, which has been correlated with the Burbank sand of Oklahoma. The decline in production was much steeper during the first years, than in Oxford and Churchill, but flattened out more abruptly and settled to a more gentle decline. Greenwood County, made up of a large number of pools producing principally from "shoestring" sand lenses, which have been correlated with the Bartlesville, shows a much flatter decline than any of the others. This may be due in part to the fact that we are comparing a district, with numerous pools, and some new drilling, with single pools, but the history of the "shoestring" production shows it to be noted for its slow decline and long life.

Of the Ordovicion fields, Peabody-Elbing and Florence-Covert exhibit the same similarity to each other as do Churchill and Oxford. They are producing from the unconformable contact at the base of the Pennsylvanian, resting upon limestones of Ordovician age, which appear to be roughly equivalent to the Viola of Oklahoma. This same horizon produces in fields of Sedgwick County, and it, together with the Arbuckle, or Siliceous lime, are producing formations of Eldorado and Augusta. The Fox-Bush district, the production of which is included with Augusta, is from a Pennsylvanian "shoestring" sand. All four curves are essentially similar and show a parallel rate of decline, with Sedgwick County perhaps, somewhat sharper. Sedgwick County includes Valley Center, Goodrich, Robbins, Greenwich, Eastborough and a few



Above: Figure 4—Production decline curve on two fields and two districts producing mainly from Ordovician limestone. Some Pennsylvania sand production is included in August Bush district.

Below: Figure 5—Production decline curves on the Eldorado field, Butler County, and the Fairport field, Russell County. Eldorado is producing mainly from Ordovician limestones and Fairport is producing from the Kansas City-Lansing limestones, known locally as the "Oswald" lime. Fairport potential has been greatly increased by acid treatment which is very successful in this field.



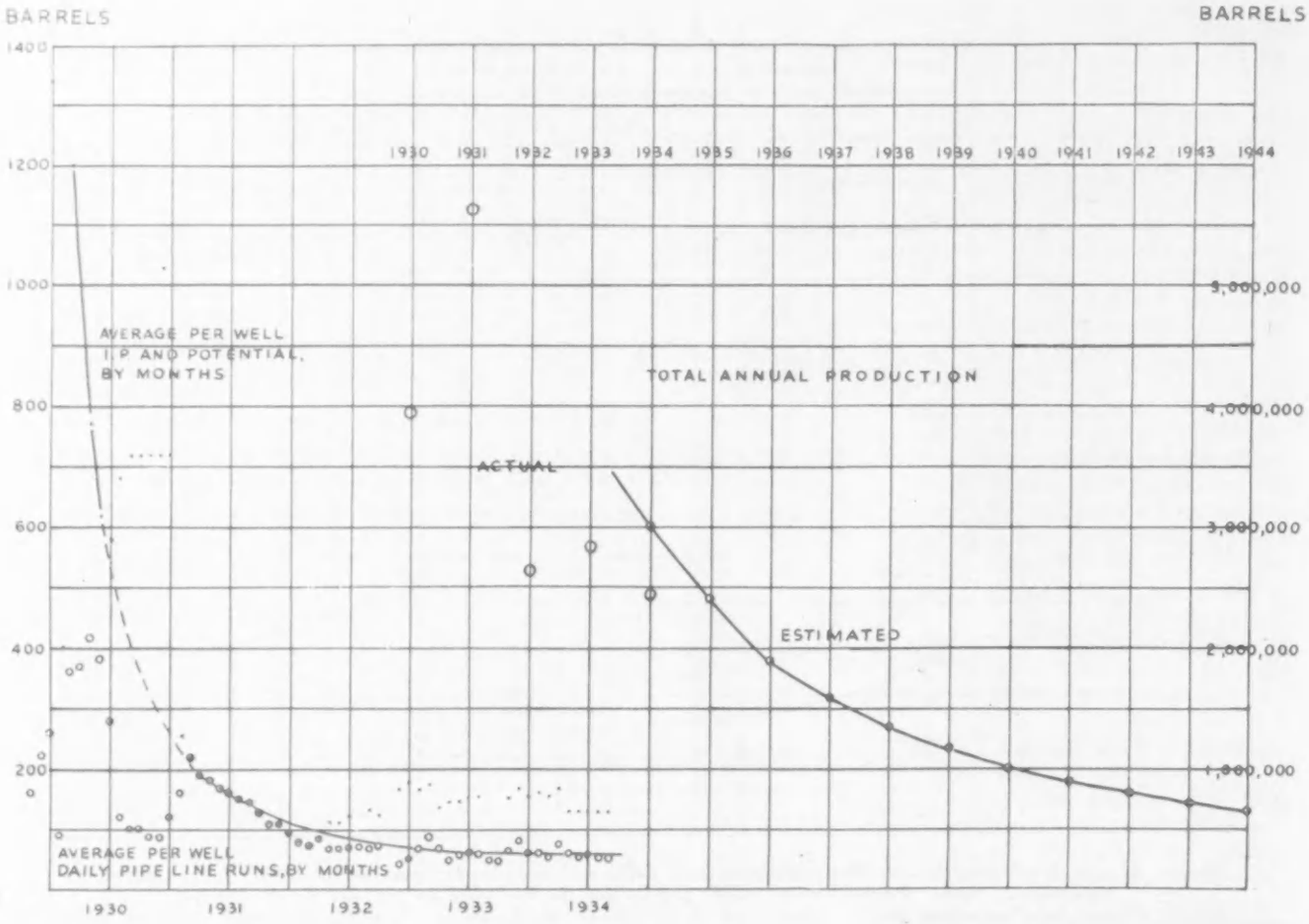


Figure 6—Decline curves on the Voshell field, McPherson County, Kansas. Left hand curve is taken after Hiestand, Bulletin American Association of Petroleum Geologists, Volume 17, page 190, and extended from October, 1931, to October, 1934, using the state umpire's reports. The dots represent average per well initial production tests, for the first five months, and 24-hour potential tests for the balance of the period. The circles represent average per well daily pipe line runs.

From March 1 to July 1, 1930, the potential curve declined when the runs ranged between 200 and 400 barrels per day. When the runs were lowered to 100 barrels, the potentials inclined in response. When the five-day production tests were taken in February, 1931, and proration lifted, the capacity per well was 260 barrels, and thereafter, to April, 1932, the average per well declined.

With the restoration of proration, well potentials increased, but the average pipe line runs have held rather closely to the curve established by the decline of previous potentials and open flow capacity.

Right hand curve was obtained by projecting, on logarithmic paper, the rate of decline as established by the left hand curve, through the 1934 "built up" production, to estimate the future production of the field.

Most of the production in Voshell now is coming from the Wilcox sand and Viola lime, with most of the Chat wells deepened, and Siliceous lime wells plugged back.

unimportant, miscellaneous pools. The curve on Eldorado is quite similar to those on other Ordovician fields.

Fairport, in Russell County, is producing from the "Oswald" or Kansas City-Lansing lime, which is one of the important producing horizons of western Kansas. The field was extensively acidized in 1932 and 1933, giving an appreciable increase in production. In the curve, Figure 5, the rate of decline established during the previous life of the field is taken as normal, and this rate projected through the 1933 production to give the estimated future production.

The history of the production of the Voshell field, McPherson County, is interesting because it offers an opportunity to study the performance of the decline curve of a prorated field. Figure 6 was prepared after a curve by T. C. Hiestand,[3] supplemented from November 1932 to September 1934, by monthly proration reports.

Hiestand pointed out that the decline curve of the average initial production and per well potentials during the period March to July, 1930, with daily average per well production between 200 and 400 barrels, when projected, fell on the points established by the daily pipe line runs, when proration was lifted, in February, 1931, and continued at the same rate, to October, 1931.

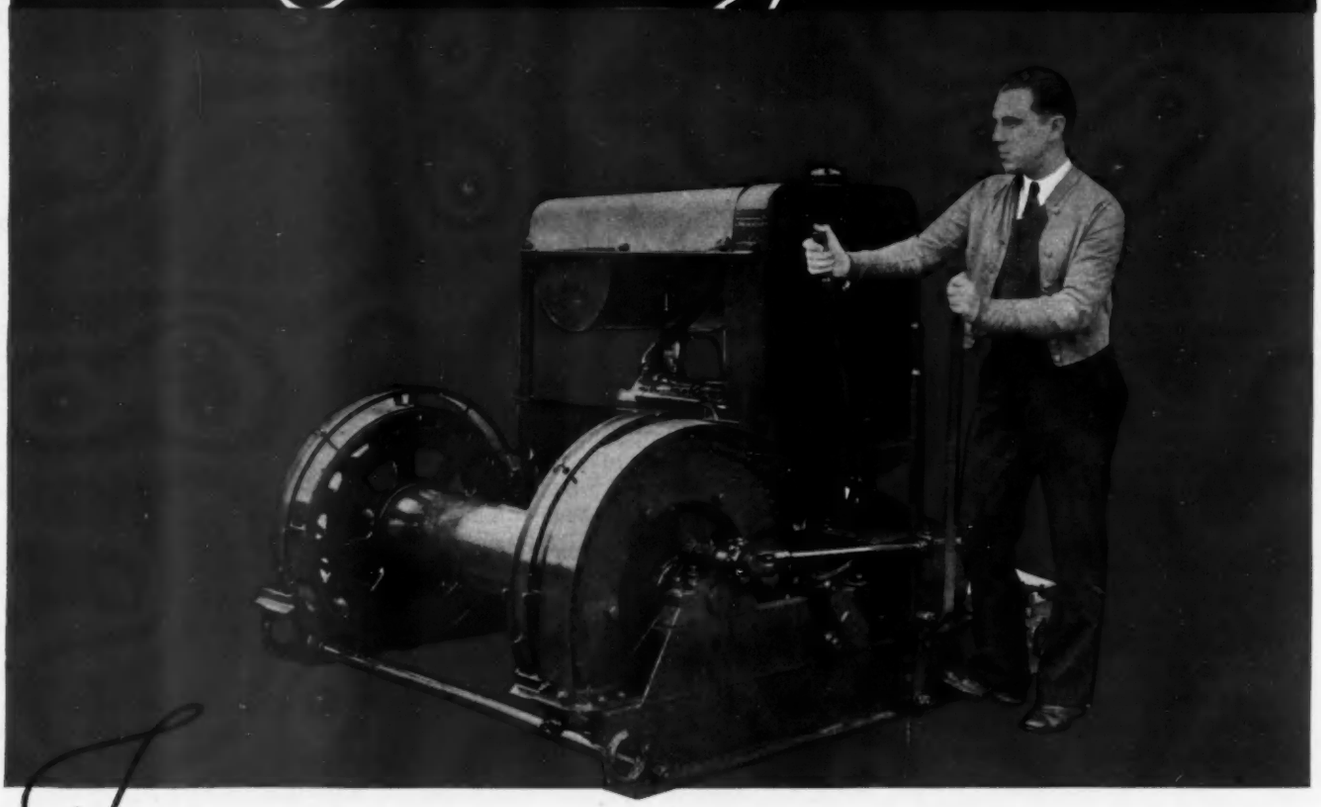
It is interesting to note that this same rate of decline prevailed through the remainder of the open-flow period, to April, 1932, and of still greater interest is the fact that the average per well pipe line runs from then until September 1934, fall rather closely to this curve suggesting that the capacity of the field is not greatly in excess of the allowable.

The potential method is undoubtedly the most equitable so far devised for allocating the allowable production among the various properties of a field of this type, but the actual producing capacity can be measured only by open flow production over a sufficiently long period to equalize the fluid and pressure conditions in the entire field. Pool potentials are, therefore, inclined to be considerably higher than actual producing capacity. High commendation is due Kansas operators for their fine spirit of cooperation in observing all operating agreements and proration orders. No hints of hot oil or other forms of cheating have come out of the Sunflower state.

Some consideration must be given to

[3] Bulletin, American Association of Petroleum Geologists, Vol. 17, p. 190, 1932.

WE *Challenge* YOU!



To find an equal value

IN ANY MACHINE OF THIS TYPE CONSTRUCTION

If you want a really low cost pulling unit, here's a machine which is not only extremely low in first cost but is economical to operate. The unit was designed and built for a purpose and it is the first time, to our knowledge, that a machine with this size motor has ever been offered at so low a price.

The design of this machine permits low cost production, yet all material and workmanship, in every detail, conforms to our most rigid specifications. It must not be confused with the usual type of unit sold in this price range.

Before you buy any pulling unit of this type, be sure that you see the NEW O-X SKID WINCH. It can be easily handled on any light truck. We do not believe that you will find its peer in construction, workmanship, performance or price. Write, wire or phone for details.

FRED E. *Cooper*

OIL FIELD REPRESENTATIVE AND DEVELOPER OF OIL FIELD MACHINERY

211 S. LANSING TULSA, OKLA.

A Few of the Outstanding Features of the New O-X Skid Winch

- LARGE HEAVY DUTY A-C RUMELY COMBINE ENGINE. *(Built to withstand the most severe operating conditions.)*
- MOTOR—4" BORE, 5" STROKE.
- LARGE CAPACITY COOLING SYSTEM.
- HEAVY DUTY SPECIAL BUILT TRANSMISSION.
- WINCH—BALL BEARING EQUIPPED.
- STEEL CONSTRUCTION THROUGHOUT.
- FREE ROLLING DRUM.
- AIR COOLED BRAKE.
- LINE CAPACITY, 6,560' OF ½" LINE.
- FOUR LINE SPEEDS, 79' TO 513' P.M.
- LINE PULL, 15,000 POUNDS.

TABLE VIII

Estimated Future Annual Capacity of 11 Kansas Fields

Field	1934	1935	1936	1937	1938	1939	1940
Augusta-Fox-Bush	800,000	760,000	720,000	680,000	660,000	640,000	610,000
Eldorado	3,500,000	3,450,000	3,300,000	3,200,000	3,150,000	3,050,000	3,000,000
Greenwood Co.	3,700,000	3,250,000	3,000,000	2,700,000	2,400,000	2,250,000	2,100,000
Peabody-Elbing	580,000	540,000	520,000	490,000	470,000	450,000	430,000
Florence-Covert	125,000	100,000	84,000	70,000	60,000	52,000	45,000
Rainbow Bend	400,000	390,000	370,000	360,000	350,000	335,000	325,000
Fairport	430,000	380,000	340,000	310,000	280,000	250,000	230,000
Churchill	470,000	370,000	300,000	250,000	210,000	180,000	160,000
Oxford	240,000	205,000	160,000	130,000	100,000	84,000	68,000
Sedgwick Co.	2,700,000	2,300,000	2,000,000	1,700,000	1,550,000	1,380,000	1,200,000
Voshell	3,000,000	2,350,000	1,900,000	1,600,000	1,350,000	1,175,000	1,000,000

proration and potentials in the Voshell field, and the 1934 production was arbitrarily "built up" to 3,000,000 barrels, and future capacity was estimated on logarithmic paper, by drawing the rate of decline shown by the average per well curve, through this point. These estimates, together with the other 10 fields treated in this manner, are shown in Table VIII.

In addition to furnishing a basis for estimating the future production from the fields studied, the decline curves permit an estimate of ultimate recovery and acre yields. These data are set forth in Table IX.

Since similar data are not available on all Kansas fields, the estimates on these 11 fields cannot be used in considering the state as a whole, though most of them fall in the "Settled" class. Their average rate of 21 percent decline over the 12-year period 1922-1933, as shown by Table VII, however, does furnish a guide in estimating the decline and future production of similar fields in the state. Over this period, these 11 fields have represented the "Flush" and "Settled" production of Kansas, producing principally under open flow conditions. It seems reasonable to assume that the "Flush" and "Settled" portions of Kansas' 1934 producing capacity will decline over the next six years at about the same rate.

The total estimated capacity for 1934 has been placed at 85,000,000 barrels. Of this 14,650,000 barrels was contributed by "Stripper" production, presumably at capacity, leaving 70,350,000 creditable to "Flush" and "Settled." Experience has shown that stripper production will decline at an average rate of about 10 percent per year.

These factors of 10 percent annual decline for "Stripper production" and 21 percent for "Settled" and "Flush," applied to the estimated 1934 capacity, give the estimates of Kansas' capacity

TABLE X

Estimated Future Capacity of Kansas' Present Fields, Barrels

Year	Settled and Flush (21% Decline)	Stripper (10% Decline)	Total
1934	70,350,000	14,650,000	85,000,000
1935	58,000,000	13,200,000	71,200,000
1936	46,000,000	11,900,000	57,900,000
1937	35,800,000	10,700,000	46,500,000
1938	28,200,000	9,600,000	37,800,000
1939	22,300,000	8,650,000	30,950,000
1940	17,650,000	7,800,000	25,450,000

for the next six years, from the present fields, as shown by the fourth column in Table VI, and Table X.

Future Discoveries

Previous discussion indicates that Kansas' oil production has been maintained on a very uniform level since 1917, due to the consistent discovery of new fields to offset the decline of the older ones. This is well shown, for the period 1923-1933, by Figure 2, Part I, as is also the importance of the individual fields discovered during the period.

In order for Kansas to maintain its past yearly average over the next five to 10 years, and to approach the estimated future demand, additional oil must be supplied. These supplies must come from two principal sources: (1) New fields within the present producing districts, and extensions to present pools; and (2) new fields in areas whose prospects are at present unknown. Additional supplies can be obtained by increased allowables in prorated fields, by acidation, repressuring and improved production methods, but the aggregate increase from these factors over a period of years will probably not be great.

Bibliography

American Association Petroleum Geologists, "Structure of Typical American Oil Fields," Volumes I and II, 1929.

American Institute of Mining and Metallurgical Engineers, "Petroleum Development and Technology," 1934.

Kansas Geological Survey, Mineral Resources Circular 2, 1929.

The Oil Weekly, Statistical Numbers, 1927-1934.

The Oil Weekly, April 30, May 7 and May 14, 1934.

TABLE IX

Estimated Ultimate Production and Acre Yields, Kansas Fields

Field	Production to Jan. 1, 1934	Estimated Future Production	Ultimate Production	Acres	ACRE YIELDS	
					To Date	Ultimate
Augusta-Fox-Bush	Unknown	8,230,000	.....	5,000 (4)	.....	.....
Eldorado	159,339,980	39,400,000	198,739,980	25,000 (2)	6,375	7,950
Greenwood Co.	91,000,000*	29,600,000	120,600,000	29,000 (3)	3,150	4,150
Peabody-Elbing	Unknown	5,780,000	.....	2,100 (1)	.....	.....
Florence-Covert	Unknown	671,000	.....	2,100 (1)	.....	.....
Rainbow Bend	11,823,850	6,040,000	17,863,850	1,180 (4)	10,000	15,100
Fairport	7,135,364	3,350,000	10,485,364	1,000 (3)	7,135	10,485
Churchill	16,465,150	2,587,000	10,052,150	795 (3)	20,700	24,000
Oxford	9,458,720	1,242,000	10,700,720	490 (3)	19,300	21,800
Sedgwick Co.	30,587,300	18,290,000	48,877,300	1,900 (4)	16,100	25,725
Voshell	15,079,600	13,785,000	28,864,600	1,200 (4)	12,500	24,000

* 1921 and 1922 estimated.
(1) A.A.P.G. Structure Symposium, Vol. 1 (from map).
(2) A.A.P.G. Structure Symposium, Vol. II, p. 160.
(3) Kans. Geol. Survey, Min. Resources Circ. 2.
(4) A.I.M.M.E.. Pet. Tech. 1934.

ACID IS as ACID DOES

if it's inhibited—it's safe!

To every oil producer anxious to reap the benefits of acidizing, Dowell says this—

Consider the acid. Is it *inhibited*? Will it do its job effectively without causing costly damage to tubing and casing?

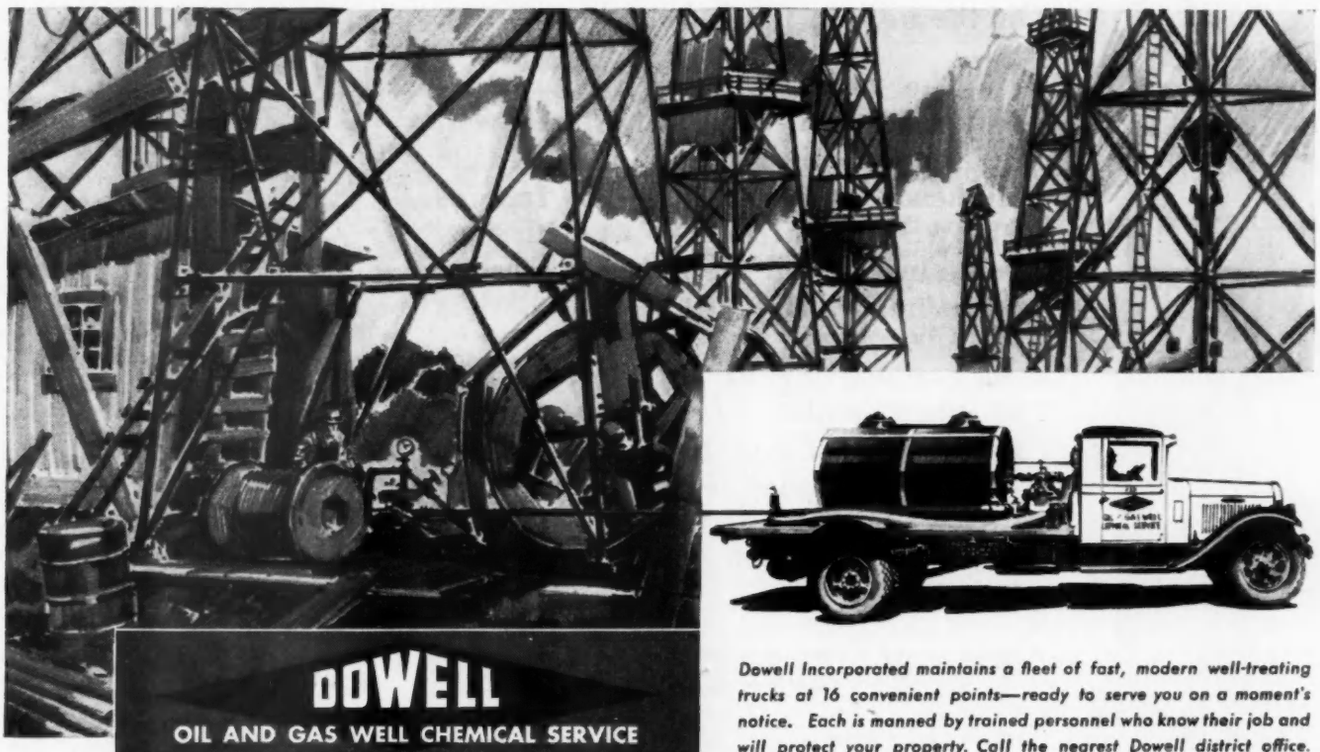
No oil producer can afford to lightly dismiss this question. It means the difference between safety and possible disaster.

Dowell uses Dowell X—the safe, *inhibited* acid. And all other Dowell well-treating materials are similarly safe and effective.

Dowell, too, will not treat a well until it has all the facts —geological and physical. Only when Dowell is sure acidizing can benefit the producer will it render this service. . . . Moreover, Dowell field men are trained treating engineers, thoroughly schooled in every phase of Dowell service.

Such thorough and competent service is to be expected from Dowell because it is a subsidiary of The Dow Chemical Company, regarded as a leader in chemical research and production.

Acidizing is of tremendous value to oil producers providing it is scientifically applied by an organization thoroughly understanding every phase of the process. Avoid "acid dumping" and so-called "new methods".



DOWELL

OIL AND GAS WELL CHEMICAL SERVICE

For information phone, write or call at any of the following district offices:

WICHITA, KANS. SHELBY, MONT. FORT WORTH, TEXAS
SHREVEPORT, LA. SEMINOLE, OKLA. MIDLAND, TEXAS
MIDLAND, MICH. TULSA, OKLA. WICHITA FALLS, TEXAS

TREATING STATIONS

LAWRENCEVILLE, ILL. MANY, LA. BOWLING GREEN, OHIO MIDLAND, TEXAS
NEWTON, KANS. MIDLAND, MICH. NEWARK, OHIO PAMPA, TEXAS
GLASGOW, KY. SHELBY, MONT. SEMINOLE, OKLA. WICHITA FALLS, TEXAS
BASTROP, LA. HOBBS, N. M. TULSA, OKLA. CHATHAM, ONTARIO

Dowell Incorporated maintains a fleet of fast, modern well-treating trucks at 16 convenient points—ready to serve you on a moment's notice. Each is manned by trained personnel who know their job and will protect your property. Call the nearest Dowell district office.

DOWELL INCORPORATED

A subsidiary of THE DOW CHEMICAL COMPANY

Executive Office—Midland, Michigan

General Office—Kennedy Building, Tulsa, Oklahoma

..SPEED UP..
Your Coring Jobs

with this new, improved wire line barrel

. . . by Brewster

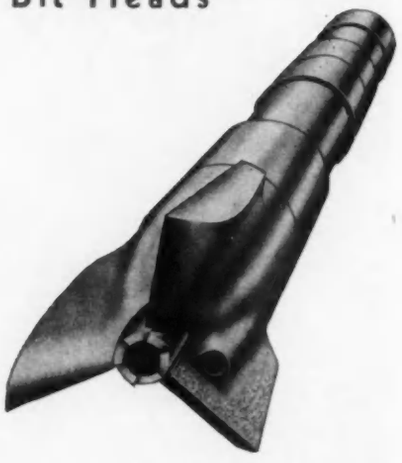
● **The BREWSTER Wire Line Core Barrel is guaranteed to save thousands of dollars in time and wear and tear on equipment in drilling any deep well.**

● **Why pull your drill stem to take a core when you can do the job with a BREWSTER Wire Line Barrel in from 40 to 60 minutes at any depth? You save from 3 to 6 hours on every core you take. You save your expensive drilling line and you save your equipment in general. You keep the walls of the hole in much better condition.**

● **The BREWSTER Barrel is time-tried and constantly improved. Equipped with 2-blade and 3-blade bit heads as illustrated—the famous BREWSTER bit heads, set with Carbolite inserts and dressed with crushed Carbolite.**

● **For sale or lease anywhere. A part of our Complete Core Barrel Service in Gulf Coast and East Texas fields. Write for descriptive literature on our BREWSTER Perfection Core Barrel (Standard) and our BREWSTER Wire Line Barrel.**

Equipped with either 2-Blade or 3-Blade Bit Heads

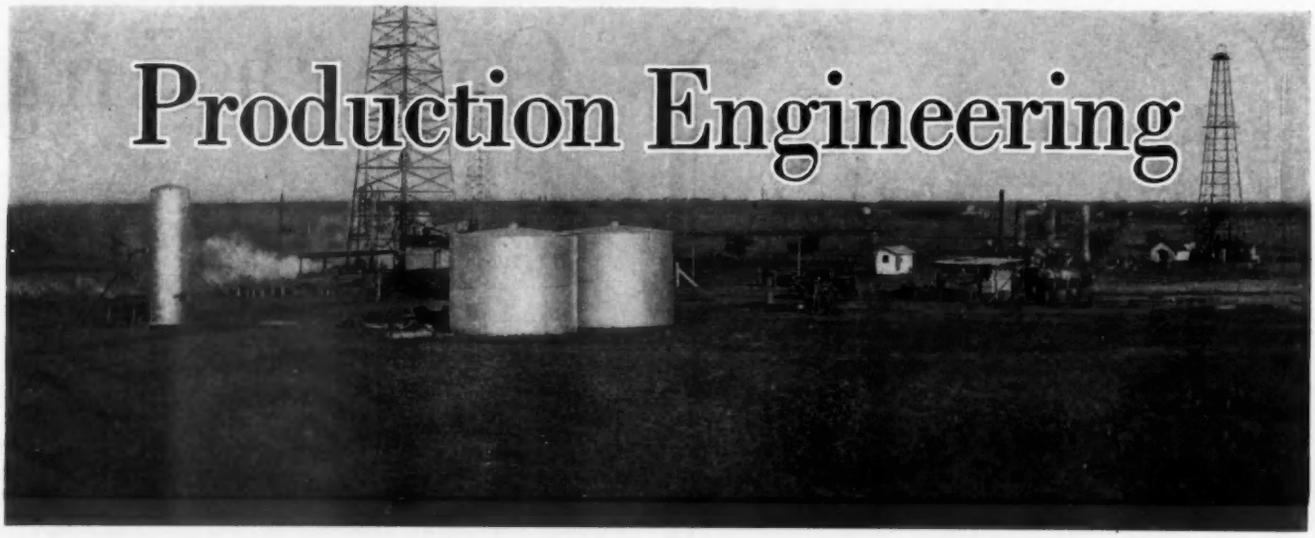


THE BREWSTER COMPANY

PHONE 3181 — SHREVEPORT, LA.

BRANCHES

Longview, Texas	Houston, Texas	Lake Charles, La.	*Export Office:*
313 E. Cotton St.,	2000 Harrington,	Broad & Shattuck,	Acme Well Supply Co.
Phone 781	Phone C-6811	Phone 256	136 Liberty St.,
			New York City, U.S.A.



The Trend *in* Petroleum Technology

Stanley Herold

THE PLANETS behave as if the sun were restraining their motion to elliptical paths, objects near the surface of the earth behave as if the earth were pulling on them, molecules composing matter behave as if they were perfectly elastic particles rapidly colliding among themselves, and atomic electrons behave as if the nucleus were restraining their motion to elliptical paths in the manner of planets about the sun. When we explain this behavior of matter in terms of gravitation, heat, and electric charge we deal with hypothesis. We simply have defined these three phenomena in convenient language without knowing if they actually exist, and without knowing—if they do exist—what they actually are. When we accept the conveniently defined language as if it expressed the truth, and proceed to deduce physical laws in conformity with it, we deal with theory. When we apply the physical laws to our daily problems we deal with practice. Hypothesis, theory, and practice are three definitely linked stages of science and technology.

As is usually the case in the development of a profession we petroleum geologists and engineers began with practice. In recent years, while continuing to hold to practice, we have reached out to embrace in succession certain perfectly logical propositions which belong to theory. There is much more theory thus to embrace before concerning ourselves with hypothesis, if it is that we are to understand eventually all things respecting oil and gas wells.

AS PREVIOUSLY STATED on this page, some of the characteristics of production curves and some of the events and conditions underground within a natural reservoir which produces oil and gas, as we judge them from our experience in the field, are precisely those which would prevail if there were Jamin capillary tubes within the reservoirs. In other words, the reservoirs behave as if a porous productive formation were a bundle of such capillary tubes radiating outward in all directions from the wells. While we are not concerned with the fundamental truth or falsity of the actual existence of these capillary tubes, we can nevertheless follow the usual procedure in accepting the affirmative statement as convenient language and so construct in conformity with it those physical laws which will permit us not only to comprehend what takes place underground in an oil and gas field, but also how we may exploit such a field to our greatest economic advantage. In developing this theory we determine proper practice, and from the results in practice we judge the value, the correctness, and the completeness of the theory. Scientific and technical procedure in oil and gas need not differ in any way from that in planetary, mass, molecular, and atomic physics. Production is in fact the physics of masses. These masses happen to be mainly of liquid and gas, and the only solids concerned are relatively fixed in position.

OUR PRACTICE, then, is not to depend upon hypothesis, but rather upon theory. It is our duty to expand the theory and improve our interpretations and applications. If the hypothesis is ever proved false, the theory and the practice will still remain correct. (Although we may some day conclude that the idea of gravitation is false, our laws of falling bodies will not in consequence become false). Hypothesis is always weak; theory, when supported by practice, is always strong.

All this is in answer to a few technologists who seem unable to appreciate the significance of the principle of "as if" which permeates every branch of science. Without this principle our scientific and technical development would forever remain undeveloped.

Operating at Hobbs Are

Remedial Work, including use of packers, chokes and acid treatment, have checked water encroachment and lowered the gas-oil ratio

THE steady reservoir pressure in the Hobbs, New Mexico, field reflects effective efforts to conserve gas, check water encroachment, and to place the field in a position to produce satisfactorily through a maximum flowing period. Measures to equalize and flatten the future decline in reservoir pressure have been voluntarily adopted by all operators, and the field is in a strong position for one that has produced so much oil and gas.

Remedial work, especially that accomplished during the past two years, has been very effective in checking the bottom-hole pressure decline. Through a gradual reduction in the average gas-oil ratio and shutting off of upper water in a number of wells, bottom-hole pressure for the entire field has shown a gradual increase since the first of June, 1934. The four bottom-hole pressure surveys made during 1934 follow:

Average Date	No. Wells	Average Pressure
February 13	147	1343
June 4	34	1310
August 12	110	1325
November 12	172	1328

The estimated original reservoir pressure was 1525 pounds. Curves showing relation between reservoir pressure and production since 1930 indicate the importance of a minimum gas-oil ratio, low production of water and an efficient rate of production. The field derives its flowing energy from gas and water drive, and proper utilization of both forces is necessary to assure a maximum flowing life and an efficient producing status.

Water Shutoff With Packers

Packers for reducing the gas-oil ratio or for shutting off water have been run with remarkable success in the Hobbs field. The practice dates back to November, 1932, when The Texas Company set a formation packer in McKinley 2 for the purpose of shutting off water. This packer shut off the water entirely and proved that the producing formation is divided into at least two parts.

After shutting off water with a packer on tubing, the possibility of reducing the gas-oil ratio in a number of high-gas wells was suggested. The success of the water shutoff in The Texas Company's McKinley 2 proved that the impervious dividing line in the main producing formation was an ideal stratum for receiving the packer. The California Company attempted to set a packer in a high-gas well in November, 1932, but mechanical trouble developed and the attempt was a failure. Shell Petroleum Corporation set a packer in McKinley A-4 in December, 1932, and reduced the gas-oil ratio from more than 25,000 cubic feet to less than 2000 cubic feet per barrel of oil.

The success of the first packer installation prompted the operators committee to recommend that all wells having a gas-oil ratio in excess of 5000 cubic feet per barrel be corrected by setting packers, or by any means chosen by the operators. In two instances newly completed wells having high gas-oil ratios had packers installed before being placed on production. Necessity for running packers was largely confined to the gas cap area.

During the past two years 25 packers have been set in the Hobbs field for the purpose of correcting excessive gas-oil ratios. Twenty of these wells, upon which gas-oil ratios could be obtained before and after setting packers, show a saving of approximately 7,000,000 cubic feet of gas daily. The packer practice was so uniformly successful that the gas-oil ratio in troublesome wells was reduced to an average comparable to the average gas-oil ratios in a number of typical Mid-Continent fields.

Results obtained by setting water packers have been little short of phenomenal. A total of 14 packers have been run, and the water has been shut off in every instance. The percentage of water before running packers ranged from 10 to 96 percent. Water encroachment in the field has been confined to the upper portion of the main producing formation, making it possible to set packers against a very tight streak that divides the two producing zones, and thus shut off the upper water while producing from the lower zone.

Although the main producing formation is considered to be divided into two zones, most of the wells have been drilled and completed to produce from both zones. Since the upper zone contains most of the gas and all the water, it has been necessary to apply remedial measures to troublesome high-gas and water producers. The producing status of the entire field has been improved by voluntary action on a number of operators.

The Hobbs field has been almost fully developed. There now are 217 producing wells and three drilling wells. The field was divided into 40-acre units soon after development started, and the agreement to drill one well on each 40-acre unit became effective. The field includes about 8000 productive acres. An interesting feature is the fact that every well in the field is tubed. Total field production to January 1, 1935, was about 55,000,000 barrels. An exact record of early production is not available, due to the nature and variety of the

Practices *Expected to* Prolong Flow

BRAD MILLS
Associate Editor

outlets, but not more than 2,000,000 barrels was produced before detailed records were kept. Location of the field retarded the movement of crude oil for some time.

Acid Treatment

The first well treated with acid in the Hobbs field was Atlantic Oil Producing Company's Grimes 1. Operators at first frowned upon the practice, since four wells were shot with nitroglycerine during the early life of the field, with no increase in production. The first well, however, was treated with acid by agreement in April, 1933, and the potential was increased from 2981 barrels to more than 14,000 barrels daily. There was some doubt as to the part the acid played in the increase, but it was generally agreed that the acid was responsible for the bulk of the increase. The true increase in production seemed to be from 4960 barrels to 14,580 barrels daily, since the rated potential before treatment was low because of a mechanical obstruction. At any rate, the increase in potential caused operators to turn toward the practice as a means of increasing the potentials in a number of smaller producing wells.

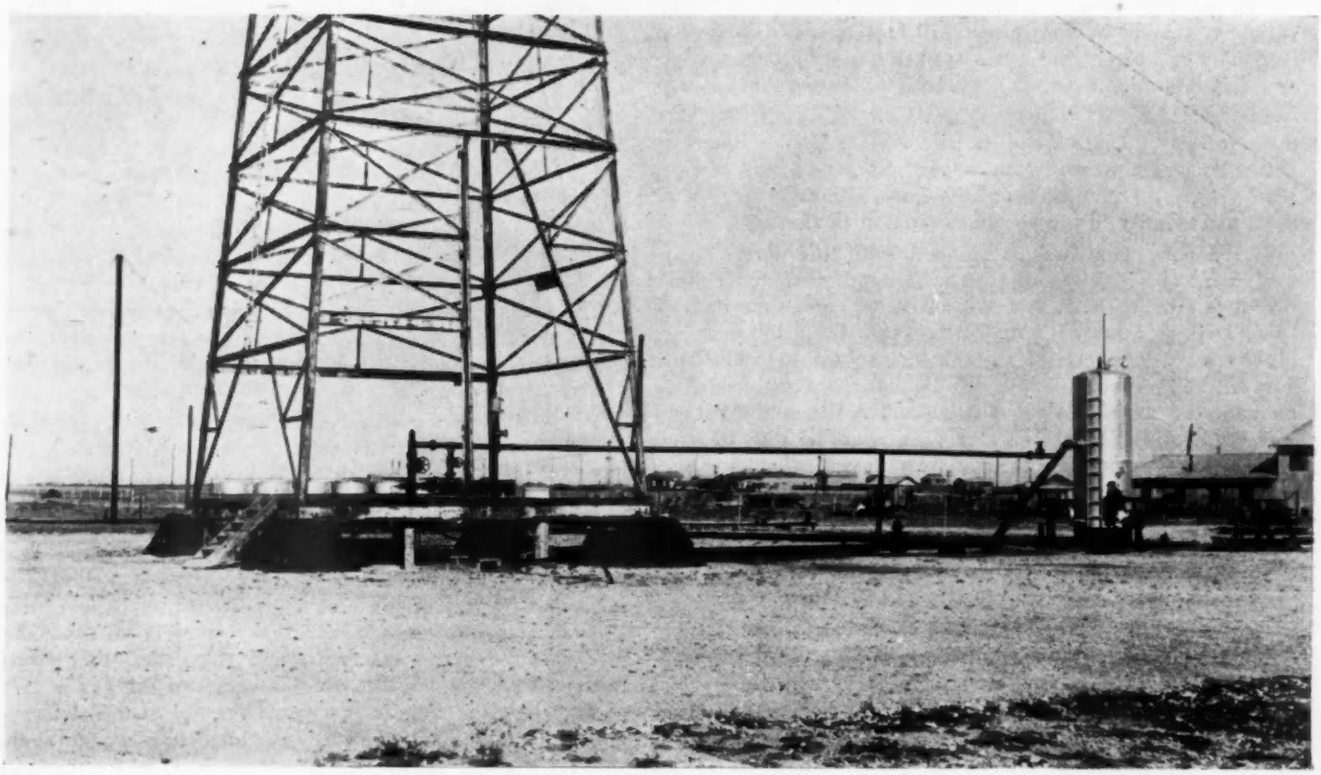
Most of the producing wells have been treated with acid.

A typical well hook-up of the Hobbs, New Mexico, field

ing formation, while the field potential has been increased sharply as the result of a rapid treating program. Wells treated with acid during 1934 totaled 143. Field engineers The practice apparently has not damaged the main producbelieve that the ultimate recovery from the field will be greater than it would be, had no wells been treated with acid. The practice apparently has opened a larger formation area to drainage, and the recovery of oil will be more complete.

If all the wells in the field were treated with acid and the field allowable remains virtually unchanged, the net gain of any operator would be theoretically small. The opening of a greater part of the producing formation to drainage, however, and establishment of a higher field potential not only give the wells a greater reserve power, but place the field in a better position to give up a larger percentage of the total oil in place.

The proration committee for the field has done good work in determining the effect of acid treatment on potentials. Its report is interesting and significant. In order to deter-



Water Packer Wells in Hobbs Field

COMPANY	Lease and Well	Total Depth	Packer Depth	Depth in Lime	Hole Below Packer	PERCENT WATER	
						Before	After
Sun	McKinley 2	4175	4065	65	110	25	0
Sun	McKinley 4	4200	4060	80	140	9	0
Sun	McKinley 3	4175	4045	60	130	40	0
Sun	McKinley 1	4175	4038	53	137	30	0
Stanolind	State 11	4200	4128	98	72	96	0
Stanolind	McKinley 26	4208	4075	85	125	87	0
Stanolind	McKinley 1	4190	4065	75	115	85	0
Stanolind	State 11	4175	4094	99	81	80	0
Stanolind	State 33	4175	4110	116	65	68	0
Stanolind	State 8	4175	4092	174	83	84	0
Stanolind	State 3	4175	4115	150	60	30	0
Texas	McKinley 2	4175	4081	66	94	25	0
Continental	State A-5 1	4178	4080	65	98	30	0
Gypsy	W. Grimes 6	4166	4065	80	101	29	0

mine the effect of acid treatment, potentials from the October 1 to 15, 1934, proration sheets were taken. From exactly the same wells the potentials after the last acid treatment were used. An assigned outlet of 33,500 barrels per day was taken as representative of the outlet from October 1, 1933, to December 1, 1934. Using this data on the 75-25 basis, a proration sheet (showing by companies) was prepared on the basis of the potentials just prior to acid treatment, and again on the final potentials after the last acid treatment. A comparison of these two proration sheets indicates that on a group of 194 wells situated on 180 units, the potential was increased from 1,325,127 barrels to 2,048,421 barrels. This was a gain of 723,294 barrels, or 54.6 percent. Units with the low average potentials prior to acid treatment gained relatively over units with higher than average potentials.

The principal producing formation in the Hobbs field is the "White Lime," which is found at depths ranging from 3950 to 4185 feet. It now is generally agreed that the "White Lime" is divided into two producing zones, the upper, a very porous and prolific light colored dolomite, and the lower, a less porous and less prolific dark colored dolomite. The upper producing zone varies in thickness from about 85 feet in the southeast end of the field to 155 feet in the northwest end of the field. The lower producing zone varies in thickness from about 110 feet to more than 400 feet. The two producing zones are separated by a thin sand or sandy dolomite, which is apparently absent in some wells.

Early development at Hobbs was with cable tools, but they were soon discarded in favor of rotary euipment. Difficulty encountered from upper gas sands and caving red beds caused elimination of their use, although they were used successfully in the southern portion of the field.

The Hobbs field was developed with the latest type equipment obtainable at the time. A number of items incidental to rotary drilling were used for the first time in this field. Drilling fluid was a major item in drilling the average Hobbs well. Absence of suitable clays in the formations encountered required importation of foreign materials to increase the weight of the drilling fluid. When the rotary was used for setting the surface pipe, about 35 tons of clay was necessary, due to the heaving nature of the water sands. The cost of mud for the high pressure gas areas ranged from $3000 to $25,000 per well, and as low as $300 outside of that area. Excessive costs were due to numerous blow-outs.

The first well required more than six months to complete, but drilling time was reduced to 40 to 70 days. Edge wells were completed in as little as 30 days. Wells drilled in the gas area cost from $50,000 to $115,000, while edge wells with little gas cost considerably less. Cable tool costs ranged from $45,000 upward.

Producing Practices

Few wells in the Hobbs field have failed to flow initially, and it has been unnecessary to pump wells that did not produce water. By agreement most wells have been equipped with three-inch tubing. It has been apparent for some time that three-inch tubing is too large for an efficient flow string, when it is considered that the daily average well production is less than 165 barrels per day. At the time the tubing agreement was adopted, such a small rate of production was not anticipated during the flush flowing period.

It is difficult to estimate the future flowing life of the average Hobbs well, but it is principally dependent upon the control of reservoir pressure and water encroachment. Wells in which water has encroached have flowed naturally until they produced more than 50 percent water. It has been estimated that wells will stop flowing when the reservoir pressure drops to between 900 and 1100 pounds per square inch. The time required for the pressure to decline to this point depends upon the rate of production and the degree of conservation of reservoir energy.

Equipment is attacked severely by corrosion in the field, particularly when brines are present. Several tanks have failed because of pitting, and metallic sulphide scale is present on almost all surface equipment. Although paraffin causes some trouble in the tubing, the accumulation in and on equipment is not enough to check corrosion. Paint has been used to advantage both inside and outside of tanks.

On prorated wells it is desirable to produce at the rate which will give the lowest possible gas-oil ratio. Such a rate obviously is the most efficient manner of producing the average well. In a number of high gas-oil ratio wells, the ratio can be reduced by decreasing the rate of flow. Wells with very high gas-oil ratios have been made to produce at ratios of less than 800 cubic feet per barrel of oil. There is apparently little choice between use of chokes. Choking at the surface, at the bottom of the tubing, or in both places has not shown appreciable differences in gas-oil ratios. Bottom-hole chokes may help to prolong the flowing life of weak wells, however.

The formation and spread of the gas cap has been the cause of much discussion and speculation. The wells that have changed from normal gas-oil ratios to high gas-oil ratios have progressively been down structure from the original gas cap. Field engineers believe that the amount of gas in solution is related to reservoir pressure, and that as the reservoir pressure declines, gas will be released from all remaining oil in the reservoir. It also is believed that as time goes on, free gas will form a blanket on top of the oil throughout the reservoir, and that even though the structure is relatively flat, the buoyancy of the gas is great enough to cause migration toward the top of the structure. This migration will give the gas blanket a wedge shape,

SUPREME IN SERVICE

Claims of superiority may sell drill pipe and casing *once*, but only superior performance in service will keep them sold. For years many experienced producers have ordered and re-ordered Pittsburgh Seamless Drill Pipe and Casing because of its supremacy in service . . . its ability to go farther and last longer. Service tells the story.

PITTSBURGH STEEL COMPANY

PITTSBURGH • PENNSYLVANIA

New York Detroit Chicago St. Louis
Tulsa Los Angeles Houston

Pittsburgh Products

Pittsburgh Seamless

DRILL PIPE
CASING
TUBING

with the top of the wedge near to top of the structure. It is assumed that gas coming out of the solution throughout the reservoir is contributing more to the spread of the gas cap than expansion of the original gas cap, due to decline in reservoir pressure. The chief aim is to control the spread of the gas cap by producing the field at an efficient rate.

Tests made to determine the amount of gas dissolved in Hobbs crude indicated that the average solubility was about 670 cubic feet per barrel when the average reservoir pressure was 1400 pounds. These findings checked with the performance of a number of wells.

Water encroachment has not been a serious problem. A few wells have shown water at the time of completion, while others have started producing water at different periods after completion. Water has encroached progressively up structure, being confined to the upper zone in the southern, southwest and northeast portions of the field. Water undoubtedly is encroaching in other producing zones, but at such a slow rate that it has not been detected.

Potential Methods

Individual allowables of the 40-acre units in the Hobbs field are determined by an acre-potential method. One-fourth of the daily outlet from the field is prorated among the several 40-acre producing units equally without reference to the potential. The other three-fourths of the daily outlet is prorated to the several producing units in the ratio that the average daily potential production of the field bears to the average daily potential production of the several units. Special adjustments may be made where an undue hardship is worked upon any operator.

"Water units" are given special allowables. These units are designated as those producing two percent or more of water. At the election of the operator, each water unit is entitled to receive an allocation of the daily outlet, based either on an allowable of the 25 percent for acreage and 75 percent for potential, or 40 percent for acreage and 60 percent for potential.

A number of methods of determining well potentials have been in force. The first method adopted for determining potentials was a wide-open flow through three-inch tubing for three hours, the production for the last two hours having been multiplied by 12. The second method adopted in 1930 was an open flow through casing and tubing for 1½ hours, with the last hour's production multiplied by 24 being the potential. In September, 1930, the wells were tested, first through the tubing, and then through both the tubing and casing for 1½ hours. In January, 1931, wells were flowed through the tubing for two hours to establish a potential, the last hour's production having been considered and applied to tubing and casing curves. Other potential tests subsequently were made. Effective November 1, 1933, a bottom-hole pressure plan of adjusting potentials went into force, and this method is applied quarterly. Using this plan, the new potential equals the old potential in force, multiplied by the fraction obtained by dividing the old bottom-hole pressure, less 1000, by the new bottom-hole pressure, less 1000. Exceptions were made for wells with packers, and for wells that had been treated with acid.

Oil from the main producing formation below 4000 feet averages about 35 gravity, and has a base bordering on naphthenic (asphaltic). The upper producing zone found at about 3160 feet yields a 39 gravity oil with a paraffin base. Average sulphur content of crude from the main producing formation is about 1.5 percent.

All producing wells in the Hobbs field do not have the same action under similar producing conditions. In some of the smaller flowing wells, the gas-oil ratio goes upward at a fairly uniform rate as the rate of production increases. In the average flowing well, the gas-oil ratio declines as the rate of production increases, provided the rate of flow does not pass the point of greatest efficiency. This means that most wells may be flowed at a fairly high rate and still maintain a low gas-oil ratio. Even in the average well, however, the gas-oil ratio curve swings upward when the rate of production closely approaches the well potential.

The Hobbs Engineering Committee and Proration Committee have been strong factors in a conservative development program. These committees have pointed out that it is desirable that the outlet of the field be restricted to a point where the water encroachment can maintain the reservoir pressure; and that the amount the field outlet is restricted is dependent largely upon the amounts of water and gas that are conserved to the reservoir by the setting of packers, and by other constructive measures. With the pressure maintained somewhere near the present level, practically all the ultimate recovery can be obtained under flowing conditions.

Gas Packer Wells in Hobbs Field

COMPANY	Lease and Well		Total Depth	Packer Depth	Depth in Lime	Hole Below Packer	GAS-OIL RATIO	
							Before	After
Amerada	State A	1	4160	4056	79	104	10,000	1,000
Amerada	State A	2	4160	4050	85	110	12,530	3,318
Amerada	McKinley	3	4170	4075	60	95	14,000	2,000
Continental	State A-33	7	4183	4085	100	98	25,116	444
Continental	State A-33	2	4174	4054	102	120	6,490	1,319
Continental	State A-29	2	4184	4076	108	108	6,500	697
Continental	State A	1	4178	4121	121	57	10,000	824
Continental	State A	3	4208	4127	105	81	13,514	1,000
California	State A	4	4170	4070	110	100	34,300	1,890
California	State A	3	4175	4052	92	123	40,000	1,200
California	State A	2	4171	4111	126	60	67,720	4,348
Getty	McKinley	4	4219	4147	132	72	8,206	1,275
Gypsy	W. Grimes	4	4153	4035	65	118	23,000	2,300
Gypsy	E. Grimes	2	4163	4066	78	97	8,090	1,211
Gypsy	E. Grimes	3	4216	4030	74	186	1,195	790
Gypsy	W. Grimes	7	4153	4075	100	76	4,500	.....
Humble	Bowers A-10	..	4220	4106	111	114	.....	2,130
Shell	McKinley A-4	..	4200	4070	60	130	22,000	1,400
Shell	Grimes	1	4175	4030	88	115	14,000	735
Shell	Grimes	3	4200	4088	88	113	24,996	820
Shell	Grimes	4	4230	4087	110	143	.....	.....
Shell	State B	1	4175	4030	60	145	8,641	.....
Shell	State B	2	4220	4030	63	190	.....	611
Stanolind	State	26	4165	4074	81	91	4,198	1,217
Tidal	Grimes	1	4180	4110	113	50	26,000	990

METHODS FOR . . .

Obtaining Pressure in Oil Production *and their* Significance

THE question of reservoir pressures, also of bottom-hole operating pressures, is of much importance. A good many articles deal with pressures and their determination as if all the problems with such work had been solved and are obtainable, but this is far from the case. A number of uncertainties exist. There is no better way to clarify the subject than to submit various viewpoints and welcome criticism and suggestions. As more facts are obtained, the observation of reservoir pressures at regular intervals will become of increasing value to operators. The author will welcome discussions on this article and on the subject in general.

S. F. SHAW
Consulting Engineer

STUDY of the various pressure conditions in an oil field is an important feature of the producer's operations in the modern methods employed for extracting oil. At almost every turn it is necessary to refer to some pressure condition, starting, if the wells aren't flowing naturally, with the gas-lift plant or the pumping plant, and tracing the power flow-line to the producing sand and back with the oil to the pipeline that carries the oil to the refinery.

There are many points at which pressure readings are made, the nomenclature of which is not yet definitely fixed. The explanation of some of these pressure terms and the significance of same should engage the attention of every operator, as this should, in time, lead to the application of a definite meaning to each pressure term employed. A nomenclature of pressure readings is published with this article.

Usually pressure readings can be observed easily at any point between the compressor or separator and the well by attaching a pressure gauge at the point where a pressure reading is desired. If accurate readings are required, a carefully calibrated test gauge should be employed, and should be tested from time to time against a "dead-weight" tester.

Pressures below the well head must be obtained by:

(a) Observing the reading on a pressure gauge at the well-head and allowing for the weight of the column of gas.

(b) Calculation of friction loss.

(c) Instruments called "pressure bombs" which are designed to record the pressure at any desired point.

Pressure bombs may be constructed so as to make a continuous record of the pressure conditions through which the instrument passes while in the well,[1] or may be designed to record a pressure at a desired point by manipulation of the line from which the bomb is suspended.

It should be obvious that even though a well has not penetrated any gas or liquid reservoir, and is open to the atmosphere, in fact, is an open and empty hole, the pressure at the bottom of the well is greater than at the top, because of the weight of the column of air or gas in the well, and proper allowances should be made for this condition, when considering pressures in oil well.

When a reservoir is penetrated that contains oil and/or gas, there exists a pressure throughout the resorvoir that is influenced by the depth of the producing formation. This initial pressure bears some relation to the hydrostatic column of water, though not necessarily the exact equivalent of the water column. It may be greater or it may be less, though in the majority of cases, so far recorded the pressure appears to be less than the equivalent hydrostatic column.

In Oklahoma City, a well with a resorvoir pressure of 395 pounds was opened to production, making approximately 3000 barrels in 24 hours, and was then closed in, at which time the bottom-hole pressure was 375 pounds. Within 14 hours, equilibrium in the reservoir in the vicinity of the well had been established and the resorvoir pressure was again found to be 395 pounds.

After a well has been closed in for some time it may happen that gas will escape from the oil in the well and collect in the casing and tubing and in the course of time may displace all the oil that was in the casing when the well was closed in. If this action takes place to the extent of completely filling the casing or tubing with gas, the pressure reading at the well-head on either the casing or tubing is the reservoir pressure, provided there be added to this well-head pressure the weight of the column of gas in the casing or tubing. For instance, the pressure reading on a well is 340 pounds. The weight of the column of gas having specific gravity of 0.69 was calculated to be 55 pounds. The pressure at the bottom of the well was then 340 pounds plus 55 pounds or 395 pounds. If there is any escape of gas through valves or other fittings, the oil rises in the tubing or casing and the well-head pressure does not then represent bottom-hole pressure.

In certain fields such as East Texas, sufficient gas does not collect in the casing to displace all the oil, consequently well-head pressures are not representative of bottom-

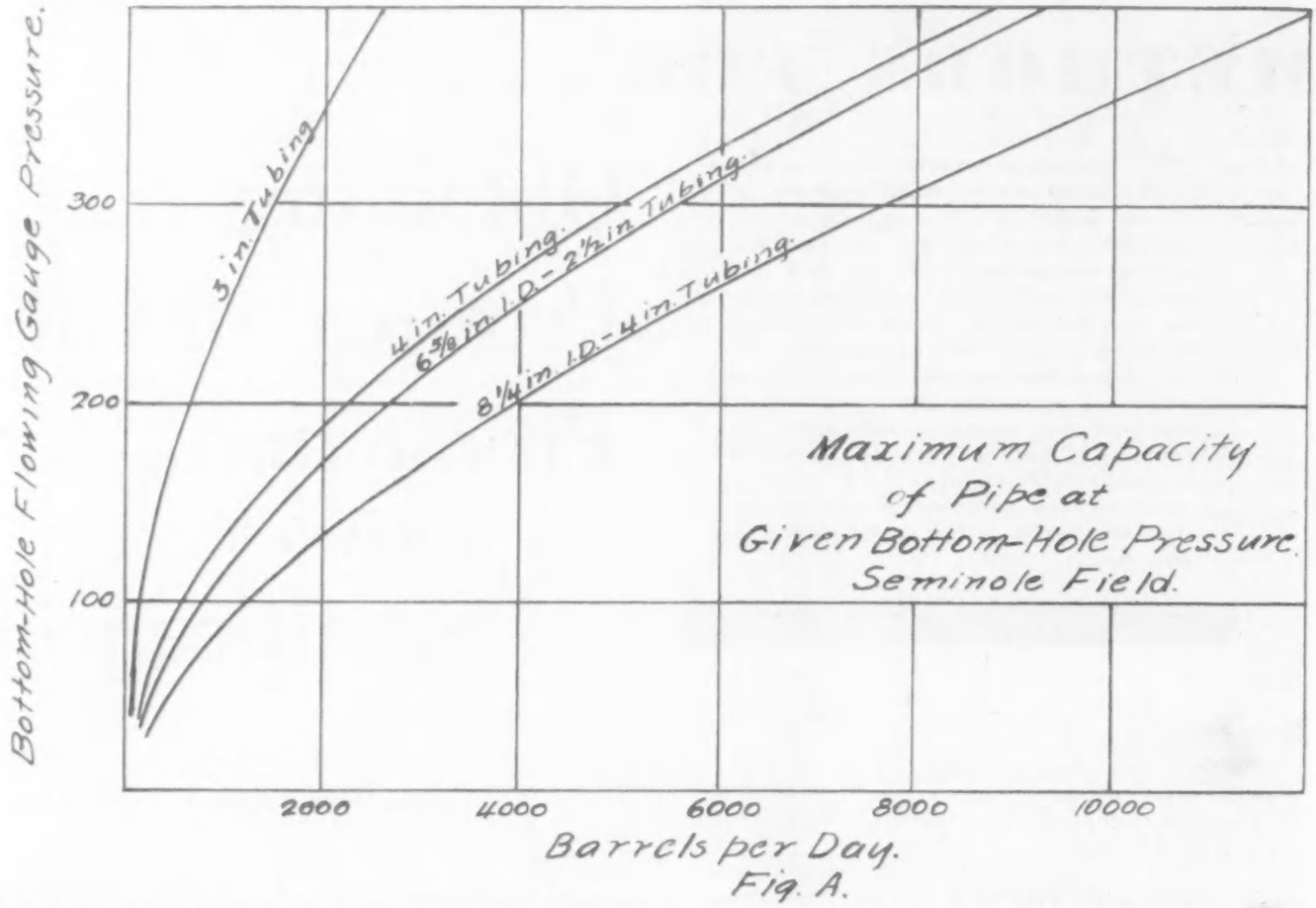


Fig. A.

hole pressures. If there is a gas line conveniently close in which gas is available at a pressure higher than the bottom-hole pressure, it is often feasible to inject gas into the well until there is no further rise in the well-head pressure. If then, the injection gas be shut off, the pressure reading at the well, plus the weight of the column of gas, will give the bottom-hole pressure, that is, the the pressure at the bottom of the tubing. This pressure at the well-head should not be taken while the gas is being admitted unless it be in very small volume, otherwise the results will be incorrect by reason of the friction loss arising from the passage of the gas through the tubing.

It is more difficult to obtain satisfactory pressure readings when a well is not tubed than when tubed. Unless a sufficient supply of high-pressure gas is available, well-head pressures in untubed wells are unreliable. In such cases it is more satisfactory to run a pressure bomb and ascertain the bottom-hole pressure than to estimate same from well-head pressure gauge readings.

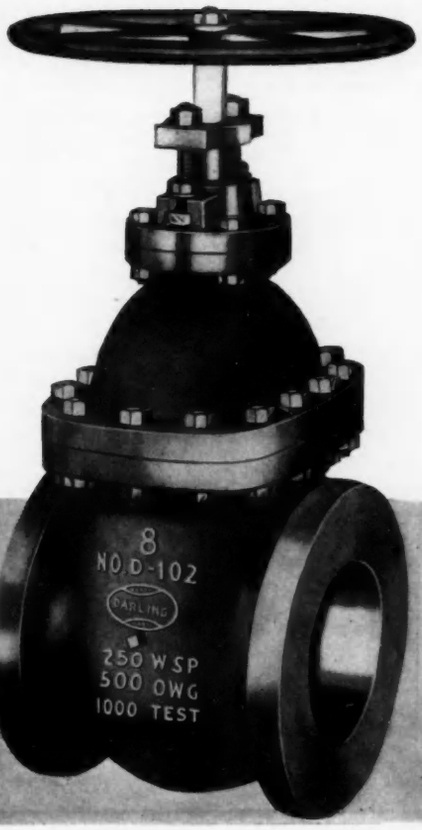
When a well that is untubed is being flowed through a casing, there is no method yet known by which to ascertain the bottom-hole flowing pressure other than by the use of the pressure bomb.

In a well that is tubed and flowing naturally, whether the flow be through the casing or tubing, satisfactory bottom-hole pressures can be measured by injecting a small quantity of gas through the tubing if the flow be through the casing, or injected in the casing if the flow be through the tubing, until there is no further rise in pressure. To this pressure there must be added the weight of the column of gas, thus furnishing the flowing pressure at the bottom of the well. If the well is flowed by gas-lift, direct readings cannot be made owing to the friction loss if there be a comparatively large quantity of gas passing through the tubing, but by shutting off the supply of gas at the well head and observing the pressure on the gauge as soon as equilibrium has been established, which usually requires one to three minutes, the bottom-hole pressure can be ascertained, bearing in mind that the pressure due to the weight of the column of gas must be added to this settled pressure, thus determining the bottom-hole pressure when the well is flowing at that particular rate of production.

In connection with ascertaining the production that it is possible to lift either by natural flow or by gas-lifting, the importance of the knowledge of flowing pressures at the bottom of the tubing is seldom realized. In Figure A taken from Transactions of the American Institute of Mining and Metallurgical Engineering (*) there is shown the relation between flowing pressure and quantity of oil possible to lift in an oil well 4000 feet in depth. It will be noted that with a given pipe diameter and a given bottom-hole pressure there is a definite maximum quantity of oil that can be lifted. For instance, in a three-inch pipe with bottom-hole flowing pressure of 200 pounds the maximum quantity possible to lift is 600 barrels per day, whereas in a four-inch pipe this quantity is 2200 barrels, and an 8¼-inch pipe with four-inch tubing, the capacity is nearly 4000 barrels per day. Compared with 4000 feet of three-inch pipe making 600 barrels per day, the capacity of a three-inch pipe 6300 feet in length with flowing pressure of 200 pounds is 275 barrels per day.

When flowing pressures decline to a low point, especially in deep wells, the consumption of gas per barrel of oil lifted becomes an excessive quantity if continuous gas-lift be employed. When this point is reached the capacity of the pipe will be reduced below the quantity that the well can produce, also these very low pressures imply that a smaller amount of energy is available in a given quantity of gas which necessitates the use of a larger quantity to

It is no accident that Darling valves offer greater strength, greater efficiency and greater ease of operation. They cost a little more because they are built a lot better.



DARLING VALVE & MFG. CO.
Williamsport, Pa.

NEW YORK OKLAHOMA CITY HOUSTON

Mid-Continent Distributors: International Supply Co., Moorlane Co.
California Distributors: Hickey Pipe & Supply Company,
3375 East Slauson Ave., Los Angeles, Calif.

DARLING
GATE VALVES

offset the reduced amount of energy available, under which conditions the cost of lifting the oil becomes excessive. When this stage is reached it is advisable to employ intermittent flowing of some form for lifting the oil since the quantity lifted can be increased and the cost of operation will be materially reduced. Intermittent methods have been employed for producing profitably wells as small as a few barrels per day in the Mid-Continent, and in Pennsylvania it has been employed in the form of periodic flow for wells making less than one barrel per day.

The input, or injection, pressure in a gas-lift well or in a well employed for repressuring, may be far from the pressure actually acting on the sand at the bottom of the well. In a well 4000 feet in depth an observation was made where the input pressure on a gas-lift well was 260 pounds at the tubing head, but the pressure at the bottom of the

Pressure Reading Nomenclature

Gauge pressures refer to the readings on a pressure gauge. In the United States and in most English-speaking countries, pressures are expressed in pounds per square inch. In some countries, such as Rumania, pressures are noted in atmospheres, or in grams per square millimeter.

Gauge pressures are pressures registered above the existing atmospheric pressure. *Absolute pressures* refer to pressures in excess of a perfect vacuum. At sea level, the absolute pressure is approximately 14.7 pounds per square inch in excess of that indicated on the pressure gauge.

Depth pressure is a term applied to the pressure reading at any point in a well below the surface.[1] *Subsurface pressure* is an equivalent term for depth pressure.

Reservoir pressure is the pressure which exists at any point within the producing formation. This pressure will vary in different parts of the pool. The *average reservoir pressure* in an oil field is, supposedly, the average throughout the reservoir although it can be only an approximate average since it can be measured in wells at only a few points. In some fields, reservoir pressures are referred to some datum plane above or below sea level.

Bottom-hole pressure, as the term would imply, is that pressure which exists at the bottom of the well. However, the term is often loosely applied to various points between the top of the sand and the bottom of the hole, or to the lower end of a tubing that may be suspended in the well. This pressure may apply to either a static or flowing condition of the well. The term *bottom-hole flowing pressure* is sometimes applied to the pressure at the bottom of the well, or at the lower end of the tubing, when the well is in a flowing condition.

Flowing pressure is a term also applied to the pressure at the bottom of the tubing when the well is flowing naturally or on gas lift. In Persia this term is applied to the pressure at the well-head when the well is flowing.[2]

Casing pressure refers to the pressure in the casing at the well-head. Similarly, the term *tubing pressure* refers to the pressure in the tubing at the well-head. Casing pressure and tubing pressure might be equal although not necessarily so.

Back pressure is a term applied to the pressure at the well-head when the production is restricted. However, a pressure at any point might also be called a back pressure. For instance, the pressure at the point where the well penetrates the sand is a back pressure as against the reservoir behind the sand face. If the well is allowed to flow freely into a separator, but with a pressure against the discharge from the separator, the pressure at the separator is usually called the back pressure against the well, although this pressure is somewhat less than the back pressure at the well-head due to the friction in the line between the well-head and the separator.

Any pressure on the separator is a *separator pressure* or *"trap" pressure.*

The pressure in the pipe line that conveys the gas from the separator to a gasoline plant is called the *vacuum-line pressure*, or *wet-gas pressure* or *green-gas pressure.*

When gas or air are being compressed and admitted to a well either for flowing the well or for injecting gas into the sand for repressuring purposes, this pressure is called the *inlet* or *input pressure.* In repressuring operations, this pressure is sometimes called the *injection pressure.*

When gas is compressed, the pressure at the intake end of the compressor is called the *intake pressure.* The pressure of the gas being delivered to the gas line from the compressor is called the *discharge pressure.*

The pressure at any point in the pipe line conveying the gas from the compressor to the well for flowing purposes is called the *line pressure*, or *header pressure.* Owing to losses due to friction and to drop in temperature between the plant and the well, this pressure is usually lower at the well head than at the compressor.

Separator and tank installation in Cayuga field

well was only 90 pounds. The difference in pressure was due to the loss from friction in passing a large volume of gas through the tubing down into the well. Erroneous inpressions may also be gained by observing only the pressure at the discharge from the compressor and assuming that this is the pressure at the well-head or at the bottom of the well. Corrections should be made for friction losses and for drop in temperature where there be such, if it is not possible to make direct observations at the well.

Table 1 is convenient for computing friction losses in some of the more common sizes of pipe employed in oil wells.[5]

Table 1
Friction of Air in Pipes

Divide the Number Corresponding to the Diameter and Volume by the Ratio of Compression. The Result is the Loss in Pounds per Sq. In. in 1000 ft. of Pipe.

Cu. Ft. Free Air per Minute	Nominal Diameter in Inches			
	2	2½	3	4
100	6.0	.....	.....	.....
200	23.9	9.3	2.9	.....
300	53.7	20.9	6.6	.....
400	94.7	37.1	11.7	2.7
500	150.0	58.0	18.3	4.3
1000	600.0	232.0	73.0	17.3
1500	1348	522	164.4	39.0
2000	.....	.....	.....	69.3

The use of Table 1 may be illustrated by an example in which a tubing of 2½-inch diameter is employed, 5000 feet in length, through which 1500 cubic feet per minute or 2,160,000 cubic feet per day, is flowing, under pressure at the tubing head of 250 pounds. The factor corresponding to 1500 feet per minute or 2,160,000 cubic feet per day and 2½-inch tubing is 522, and this divided by the ratio of compressions (264.4/14.4, which is 18.36) is 28.5. The loss per 1000 feet of pipe is 28.5 pounds, and for 5000 feet is 5x28.5, or 142.5 pounds pressure loss. The pressure at the discharge end of the 5000 feet of 2½-inch tubing would be 250 less 142.5, or 107.5 pounds. The pressure due to the average weight of the column of air 5000 feet in depth with pressure of $\frac{250+107.5}{2}$ pounds is 34.7 pounds, therefore, the pressure at the bottom of the tubing would be 107.5 pounds plus 34.7 pounds, or a total of 142.2 pounds.

Weymouth's formula is generally accepted as more nearly covering all the conditions of loss in pressure, temperature, etc., in transmission of gas, and is given herewith:

$$Q = 15{,}385 \left[\frac{(p_1^2 - p_2^2)\ d^{5\ 1/3}}{G\ T\ L} \right]^{1/2}$$

in which forumla,

Q equals the number of cubic feet per day.
p_1 equals the higher pressure.
p_2 equals the terminal pressure.
d equals the diameter of the pipe in inches.
G equals the specific gravity of the gas.
T equals the absolute temperature of the gas in degrees Fahr.
L equals the length of the pipe in miles.

An example illustrating the use of Weymouth's formula in a well is as follows:

Q equals 3,442,000 cubic feet per day.
p_1 equals 480 pounds gauge pressure, or 494.4 pounds absolute.
d equals 2½ inches.
G equals 0.69.
T equals 124 degrees Fahr. or 584 degrees Fahr. absolute.
L equals 6344 feet or 6344/5280 miles, or 1.2 miles.
p_2 is the terminal pressure to be determined.

Substituting these figures in the formula we have,

$$3{,}442{,}000 = 15{,}385 \left[\frac{(494.4^2 - p_2^2)\ (2\frac{1}{2})^{5\ 1/3}}{0.69 \times 584 \times 1.2} \right]^{1/2}$$

Solving for p_2, we have 248.7 pounds absolute, or 234.3 pounds gauge pressure.

The weight of the column of gas is 37.6 pounds, therefore, the gauge pressure at the bottom of the well is 234.3 plus 37.6 or 272 pounds.

The result from using the Missouri School of Mines Formula is different from that of the Weymouth formula. The quantity Q, per minute, corresponding to 3,442,000 cubic feet per day, is 2400 cubic feet for which the factor in a 2½-inch pipe is 1376. The number of compressions for 480 pounds gauge pressure is 34.33. 1376 divided by 34.33 is 40, for air and for gas at 0.69 is 40 × 0.69, or 27.6 pounds which is the friction loss per 1000 feet of pipe. The total loss for 6344 feet of pipe is 27.6 × 6.344, or 174 pounds friction loss. The higher pressure of 480 pounds less 174 pounds friction loss is 306 pounds, to which should be added the weight of the gas to arrive at the bottom-hole pressure.

A check on the above methods was obtained by closing in the well, and observing the pressure when equilibrium was established, and the gauge reading at the top of the column was 325 pounds. There appears to be considerable discrepancy between these methods which would be well for investigators to clear up.

The statement is sometimes made that the gas-lift will cease to function when the pressure required to lift the oil is greater than the formation pressure. Of course, this is correct, based upon the assumption made that the flowing pressure is greater than the formation pressure. But the operator would do well to inquire into conditions before assuming that the flowing pressure will exceed or equal the formation pressure when lifting a given quantity of oil through a pipe of a given diameter.

As an illustration of the low pressures that may be employed, data are given in Table 2 in connection with the quantity of water that was lifted with a given bottom-hole pressure by the writer in an air-lift operation[6]:

TABLE 2
Data on Quantity of Water Lifted Under Different Flowing Pressures

Test	Lbs. Flowing Pressure	Feet Submergence	Feet Lift	Barrels of Water Lifted per Day
1	8½	20	1070	2300
2	17¼	40	1050	3800
3	47¾	110	980	5000

The data in Table 2 illustrates the possibility of lifting a liquid under very low flowing pressure, if the conditions are such as to permit this to be done. In the tests noted in Table 2, the lift is low compared with lifts in the Seminole or Oklahoma City fields, and the pipe diameters were larger than in either of those two fields.

At present engineers are endeavoring to employ reservoir pressures as a guide in the estimation of reserves in a pool. As yet this is an uncertain procedure since many factors enter into this question that are as yet unknown to the engineer. However, as more facts are obtained, the observation of reservoir pressures at regular intervals may become of much value in assisting to place an estimate on these reserves.

[1]D. G. Hawthorn. Subsurface Pressures in Oil Wells and Their Field of Application. Trans. A. I. M. E. Pet. Dev. & Tech. 1933 p. 148.

[2]Cecil J. May. Efficiency in Flowing Wells. Paper read before the A. I. M. E. at Tulsa, Oct. 1934.

[3]D. G. Hawthorn. Rapid Advance Made in Perfecting Instruments for Exact Recording of Subsurface Pressures. Oil & Gas Jour. Apr. 20, 1933, p. 16.

[4]S. F. Shaw. Gas Energy in Flowing Wells. Paper read before the A. I. M. E. at Tulsa, Oct. 1934.

[5]Oil Well Blowing Hand Book. Ingersoll-Rand. 1927, p. 32.

[6]S. F. Shaw. Unwatering the Tiro General Mine by Air Lift. Trans. A. I. M. E. (1920) Vol. LXIII, p. 421.

MEN OF THE OIL INDUSTRY

TRAVEL BY TRAIN

By "SP" it's cheaper than driving your car—and you also save time and energy!

ADVANTAGES LIKE

Southern Pacific offers outstanding service between major points in Texas, Louisiana and Oklahoma—to and from California and the West.

A few fast trains of a great fleet: "Sunset Limited," "Sunbeam," "Owl," "Sunset Mail," "New Orleans Limited," "Texas Limited" and the "Border Limited."

ASK YOUR AGENT!

"SP" DINING CAR "MEALS SELECT"

80c Enjoy a delicious five-course luncheon or dinner from 80c to $1.25.

50c An excellent club breakfast for as little as 50c. A la Carte service, too.

Southern Pacific

J. T. MONROE, Passenger Traffic Manager
Southern Pacific Building, Houston, Texas

SHIP VIA "SP"... PICK-UP & DELIVERY SERVICE

Soviet 1935 Plans Call For Increased Activity

An output of 28,400,000 tons of crude oil is called for in Russia in 1935, third year of the Second Five Year Plan.

Of this, the Azerbaijan Oil Trust operating the Baku field, must contribute 22,000,000 tons. The 1934 output of Baku was 19,000,000 tons.

The Soviet oil industry, from 1933 to 1937, is being developed at an ever higher rate than during the First Five Year Plan, when the output of oil and gasoline rose 90 percent according to Soviet figures, for specifications call for tripling the output of gasoline and ligroin, increasing the yield of lubricants 2½ times, and more than doubling that of oil and almost doubling that of kerosene.

Figures from USSR reveal that from 1925 to 1932, consumption more than tripled, amounting to 4,700,000 tons for the beginning of that period, and 14,400,000 tons at the end.

The problem of sufficient supply was recently revealed by V. Shemyatovski, head of the fuel section of the state planning commission, who calls for immediate construction of cracking installations to meet the oil demands of the country in 1937. In that year, according to the Soviet plan, the output of oil refineries now operating or under construction will amount to 5,600,000 tons of kerosene and 4,000,000 tons of gasoline, while the actual demand will run as high as 7,200,000 tons of kerosene and 8,200,000 tons of gasoline.

In addition to eight new cracking installations of the Saratov Combinat, including three new installations in Baku, Vir. Shemyatovski calls for the construction in 1935 of a cracking combination capable of treating 1,500,000 tons of crude oil, from which 380,000 tons of gasoline could be obtained annually. In addition, another plant, capable of treating one million tons, must be started this year in Baku, he declares.

During the 15 years which have elapsed since the Soviet oil industry was nationalized, prospecting expeditions have discovered new oil-bearing districts in Central Asia, Georgia, Baikal, Kamchatka and elsewhere, while large supplies of oil were found in Maikop, which had been abandoned before the Bolshevik era, according to the Soviets.

The first oil well in the Arctic is now being drilled on Cape Nordwick, and the yield in distant Sakhalian grows steadily each year. In the Urals, where national conditions resemble those in the main oil districts in the United States, and in the promising Emba region, where two new areas have been found, large-scale prospecting is now being carried on.

FOREIGN DEVELOPMENTS AND TECHNOLOGY

Aerial Mappers Active on North Mexico Trend

An attempt to extend the production of South Texas into Northern Mexico is further displayed by the continued exploration work in that particular area. Aerial maps are now being made of the unmapped portion of that trend, the mapping being used in connection with geological and geophysical work during the past several years.

Considerable of the territory already has been photographed from the air, but several thousand square miles are included in the new work now under way by an American concern.

The deepest test yet drilled in the extreme northern portion of Mexico is under way 40 miles southwest of Nuevo Laredo, and in the State of Nuevo Leon, Mexico. It is the Mexican Gulf Petroleum Corporation's San Ambrosia 1, making hole near 8500 feet. Just below 8410 feet, a drill stem test was attempted and the well attempted to blow out. The well likely is in the Pennsylvanian at this level.

Continental Oil Company's Zacata 2, about 40 miles west of Reynosa and in Tamaulipas, Mexico, is drilling at 2700 feet. Compania de Petroleo's El Charro Rio Bravo 5-A, 23 miles southwest of Reynosa, and also in Tamaulipas, is drilling just below 4900 feet. In the same state, Ohio Mexico Oil Company's Rancherias 2, eight miles southwest of Rio Grande City, is drilling at 1810 feet.

George E. Smith's Las Uvas 1, near Allende in Coahuila, Mexico, is scheduled to start drilling within a few days. It has been slow in rigging up, being several weeks behind the proposed spudding date.

Government Company to Operate Soon in Mexico

By order of the president of the Republic of Mexico, activities of the company called Petroleos de Mexico, S. A., are about to begin, according to a communication received by THE OIL WEEKLY January 29.

Organization of this company was authorized by decree of the Mexican Congress dated December 28, 1933.

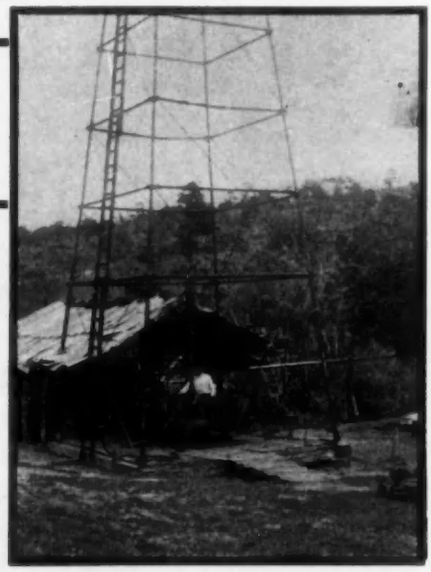
"Etromex," as it is known, is a corporation of the mixed type which is to undertake petroleum industry operations so as to be able to regulate the home market for oil and allied products in such a manner as to assure a sufficient supply for the country as a whole and, more especially, to meet the needs of the government and national railways of Mexico. It is the first company of this kind to be organized in Mexico, and its stockholders will, one one side, be the federal government and on the other Mexican citizens that have decided to invest their money in the petroleum industry.

Management of the new organization will be under the direction of Licenciado Primo Villa Michel, former secretary of the national economy, whose articles on the Mexican petroleum industry have appeared in THE OIL WEEKLY from time to time.

Shell-Mex Reported Doing Exploratory Work in Cuba

Shell-Mex Corporation, Royal Dutch Shell subsidiary, is reported engaged in extensive exploration work in Cuba, with preliminary studies in charge of an expert from The Hague, Holland, who recently arrived in Habana.

Cuba has two producing areas: Motemba Basin, a naphtha field, and Minas de Bacuranao, production from which has not been sufficient to entice many new operators to that country in the past several years.



Motembo Basin is a monocline with oil accumulation against igneous barriers. It is also characterized by irregular dome formations with faultings. Bacuranao oil comes from sandy limestone, serpentine, sandstone, and conglomerations of igneous origin.

Motembo Basin's deepest hole was drilled to 2000 feet. The deepest hole in Bacuranao was drilled to about 1100 feet.

Colon Subsidiary's Venezuelan Production

Production of Colon Oil Corporation's producing subsidiary in Venezuela for the four weeks ended January 18, was 430,100 barrels.

Yugoslavia Joins Ranks of Wildcating Nations

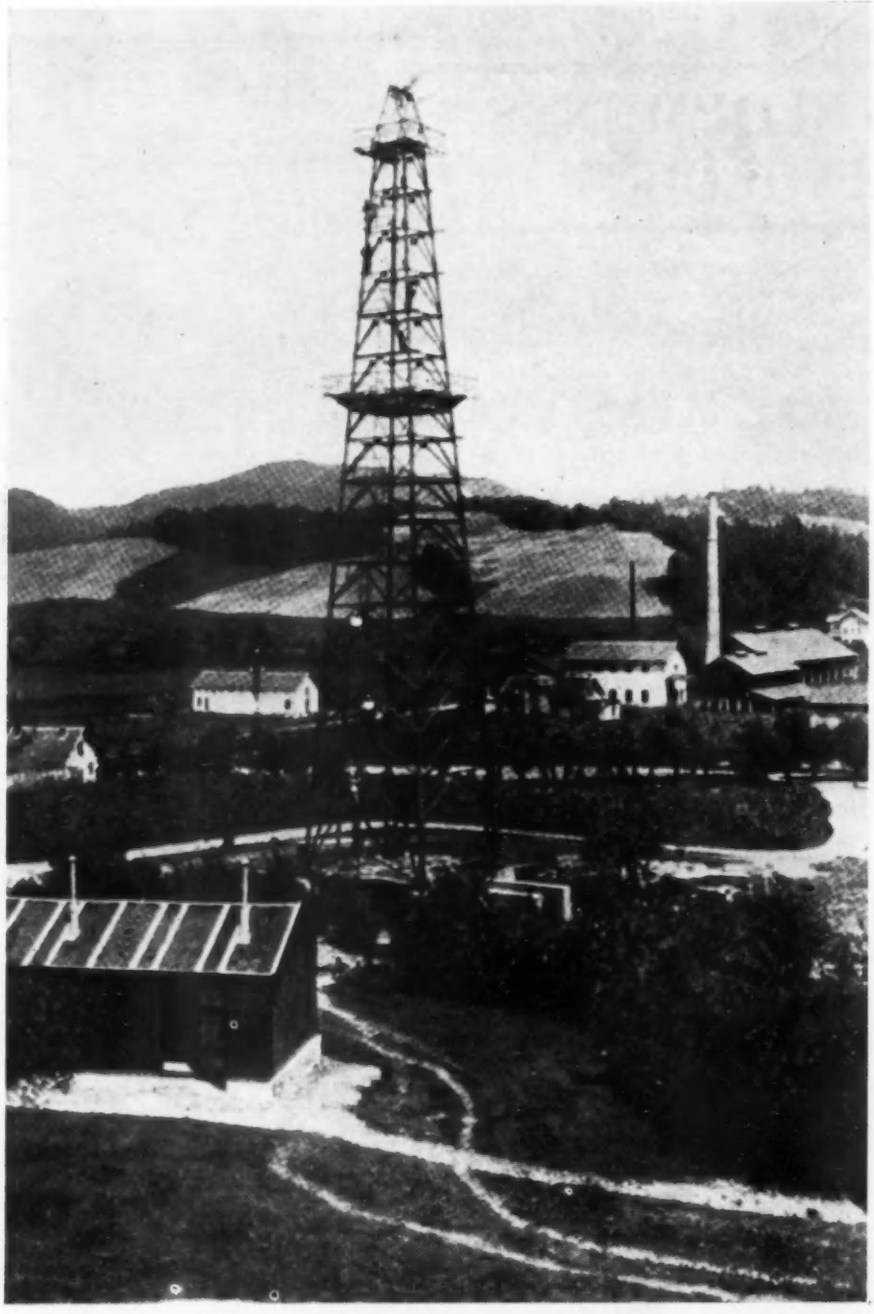
LEO TIUKA
Petroleum Engineer, Vienna, Austria

YUGOSLAVIA, which has always depended upon imported products for domestic consumption of petroleum and petroleum products, is engaged, as a government, in exploratory efforts directed at amelioration of such a situation.

Thus far no commercial production has been found. But in consideration of the fact that the present deep test sanctioned by the government may be termed the only serious effort in wildcatting, and possibly the only one equipped with sufficiently heavy machinery to penetrate what geologists hold to be strata more likely to yield oil, discouragement is not warranted. On the contrary, the government's efforts thus far seem to justify further effort.

At the beginning of 1933, the Autonomous Administration of the State Monopolies of Yugoslavia began to take a serious interest in deep-boring technique as a possible solution to Yugoslavia's petroleum import business. It was felt that reserves which may have been passed up with inadequate equipment, or not penetrated by light rigs, might be brought to light with modern technique.

Early in 1934, a decision based on the above conviction was made, with the result that boring was inaugurated in the neighborhood of Kreka, in the district formerly called Bosnia. Government engineers plan to reach a depth of 2000 meters (6560 feet) with the machinery installed, providing commercial production is not encountered above that depth, according to a decision reached before actual boring was commenced. Geological information obtained from cores up to January 15,



Deepest test drilling near Kreka, Yugoslavia, using rotary of Austrian manufacture and destined to go to 6560 feet

1935, is very satisfactory, assuring that operations at the wildcat will continue with the originally planned depth still the objective.

The Kreka wildcat, which is using a rotary of Austrian manufacture, has thus far revealed some interesting subsurface conditions, knowledge of which will be of considerable advantage to supervisors of future exploration work. For example, as in the Gulf Coast region of Texas and several vicinities in Mexico, drilling is impeded considerably by the presence of caverns. Secondary falling of rock and the frequent succession of hard and soft strata have involved bit selection and changing and circulation difficulties.

However, the difficulties have been overcome by the operators and the well trained staff of technical consultants active at Kreka. Considering that the test is the government's initial attempt, progress has been rather remarkable.

Notwithstanding that borings for salt and other purposes with equipment designed to penetrate to 1000 meters have been carried on for some time in Yugoslavia, the wildcat for oil at Kreka is the first deep test undertaken, and its outcome will be watched with the keenest interest, not only by Yugoslavia to which it means so much, but also by those who have up to now profited by that nation's dependency in the matter of refined oil products.

Serious Search for Oil Begins in Switzerland

A subdued stir has been provoked recently in Swiss technical circles by the announcement that foreign capital was contemplating drilling for oil in that country.

A company has been organized which proposes to drill at least 15,000 feet of hole in Western Switzerland; a preliminary general exclusive prospecting license over a large tract has been secured and it is understood that geophysical research will begin quite soon, according to a letter received by THE OIL WEEKLY from Montreaux, Switzerland.

A number of dry holes have already been drilled in the past, some located with the aid of the divining rod, others in well known synclines. These tests cannot therefore confirm or contradict the opinion prevalent among local geologists that the country has but poor chances of ever becoming an oil producer.

The present attempt is the first which appears to be seriously conducted, and developments will be interesting to watch, especially in view of the great hardness and numerous cavities found in the deeper formations.

A few oil bearing sands are known in the Teritary, as well as not unimportant seeps, and asphalt in the Cretaceous. The deeper and possibly favorable Gault, lower Liasic and Permian have never been touched by the bit. The oil bearing Tertiary and Cretaceous (?) have never been drilled in well selected locations.

The old saying "the bit must tell," remains true, even in a country which has furnished scores of petroleum geologists to the world oil industry.

State Proposes Use of Reclaimed Oil in Germany

United States Trade Commissioner George R. Canty, of Berlin, Germany, reports that official effort is being directed at reduction of import of lubricating oil through the re-refining of used, or waste, lubricating oil.

Officials state that great values are being lost annually by the waste of old industrial and automobile oils, the greater part of which could be saved and re-used for their original purposes, if carefully regenerated.

"In order to suppress imports" the commissioner says, "ministers of economics and transportation have pointed out the significance of this matter. Support has been asked of public bodies and business circles in a campaign for the collection of old oil and the use of reclaimed lubricants."

The public antipathy to "second-hand oil" has not been fully conquered, however.

MARKETS and STATISTICS

Mid-Continent Prices Lower With Hot Oil on Increase

THE markets for refined oils in the Mid-Continent were decidedly weak and unsteady late in the past week, due largely to further loosening of control in the East Texas field. And the immediate outlook was uncertain, with any turn for the better or worse depending, apparently, in large measure, on further action by Congress on the Connally bill. That measure, passed by the Senate, and expected to pass also in the House, would restore federal control of interstate oil shipping, through reinstatement of the federal tender board. It would replace the recently invalidated Section 9 (c) of the Recovery Act.

The weakness of the markets developed along with further substantial producing and refining of hot oil in East Texas. The illegal output late last week was being estimated around 40,000 barrels daily, some estimates being slightly higher and some lower. In the previous week, such output had been held down around 30,000 barrels.

The number of refineries operating in East Texas was on the increase, with about 25 plants already active. A considerable percentage of the refineries were presumed to be operating, at least to some extent, on illegally produced crude.

A substantial proportion of the illegally produced gasoline put out by those refineries was going to the market within the state by trucks. For the state authorities are fairly successful in their efforts to prevent hot oil and products from moving by rail, either interstate or intrastate. The result was depressed service station prices in a large part of Texas.

Through court Complications, however, some untendered gasoline and other products have been going into the interstate commerce channels, and there has been fear that still more would be so released. Consequently, the general Mid-Continent market suffered.

Late in the week the gasoline prices at refineries were off an eighth cent a gallon throughout the Mid-Continent, as compared with a week earlier. The new prevailing prices in East Texas on gasoline eligible for tenders and for rail movement within or outside of the state appeared to be averaging about as follows, the quotations being on U. S. motor fuel: third grade, or below 62 octane, 3⅜ cents per gallon; middle grade, 62-67 octane, 3⅞ cents; and premium grade, 68-70 octane, 4⅜ cents. Corresponding prices in both North Texas and Group Three, Oklahoma, region, were 3⅜, 4, and 4½ cents a gallon.

Although the East Texas tendered gasoline commanded the above given prices, the market was not nearly so good on material moving by truck, in competition with illegal material. On those intra-state truck movements, third grade gasoline could be bought readily at 2½ cents a gallon, and some was said to be selling for less.

Those low prices in East Texas were naturally conducive to depressed postings at service stations in towns and cities within trucking distance of the big field. In Houston, the third grade was down several cents, to 11 cents a gallon, presumably including five cents state and federal taxes. In some areas, the retail postings were reported as low as 10 and in some cases nine cents a gallon. Dallas and Fort Worth were among the cities with greatly depressed postings.

Group 3 Markets Slow Due to Future Uncertainty

A COMBINATION of several major influences was advanced as being responsible for the downward trend of the Mid-Continent market, which was generally characterized as slow as the week came to a close. Bad weather throughout a large portion of the northern Mississippi Valley has held side roads impassable for several weeks, thereby reducing rural travel and agricultural activity to a minimum. Uncertainty on the part of jobbers probably should be advanced as the primary retarding influence.

There are some observers who contend a decision adverse to the government in the pending gold cases would influence the petroleum products market through a downward revision of commodity prices in general. A decision is expected within the next few days. Although this proposition is beyond the understanding of many of the buyers of refined materials the uncertainty of the possible effects of an adverse decision is said to be holding back some demand.

Another factor is the potential threat of material recently moved from the East Texas area under court order to Gulf Coast ports, where large amounts are reported held in storage. Some difference of opinion as to the possible influence of this material exists. However, it is being pointed out that not more than 125 cars of motor fuel released from East Texas refineries reached the domestic market. Since a portion of this went southeastward its effect on Group 3, Oklahoma territory, has been negligible except in its creation of further uncertainty. One fairly large northern Mid-Continent refiner is reported to have sold appreciable amounts of third-grade U. S. motor at 3¼ cents per gallon, a figure which seemed to be the absolute low late in the week. As a whole, the market was unsteady but generally analyzed as being in position to move upward on short notice under the influence of a few favorable breaks. Jobber's stocks were reported at reasonable levels and purchases in truck lots to many who normally buy in tank car quantities.

East Texas Price Not Disturbed by Greater Runs

Tyler.—Release of great quantities of refined and semi-refined products held in storage in East Texas by independents through district court injunctions issued against the Texas Railroad Commission from interference has not disturbed the price structure.

Quantity buyers of gasoline availed themselves of the opportunity to take on the motor fuel stocks offered for immediate delivery under the court order at prices ranging from 3⅛ to 3⅜ cents per gallon, depending upon the grade of the commodity. Stocks of gasoline were cut to a low level in East Texas with the sale of approximately 1344 cars to three groups of buyers. In addition to the 1015 cars of

gasoline reported last week as having been purchased by East Texas Oil Refining Company and others from McMurrey interests and Union Refining Company at 3⅛ cents, a major company booked 225 cars, and brokers purchased 104 cars to move to middle-western points. The major buyer is to move its gasoline to Atlantic coast terminals.

Encouraged by their apparent victory over state authorities in obtaining the release on products stored prior to December 10 by court order, East Texas plant owners have extended their crude charges to stills to about 50,000 barrels daily. There are 32 plants in operation, and more than one third of the number are reputed to be utilizing crude that is not supported by tenders, however, a few are operating on crude tops, else rerunning residuum and fuel oil in cracking units after stocks of such commodities were released by court injunctions.

Illegal production in the East Texas field is estimated at more than 30,000 barrels daily, with considerable oil being diverted to earthen pits to replace stocks being withdrawn and sold under the protection of the court injunctions. Tank car shipments of petroleum products from the district are again reaching a large volume. During the week ending January 27 a total of 1857 cars were accounted for including 99 cars of gasoline as compared to 1389 cars the previous week. Reports indicate that approximately 1,200,000 gallons of gasoline and kerosene was marketed.

East Texas Tank Car Shipments

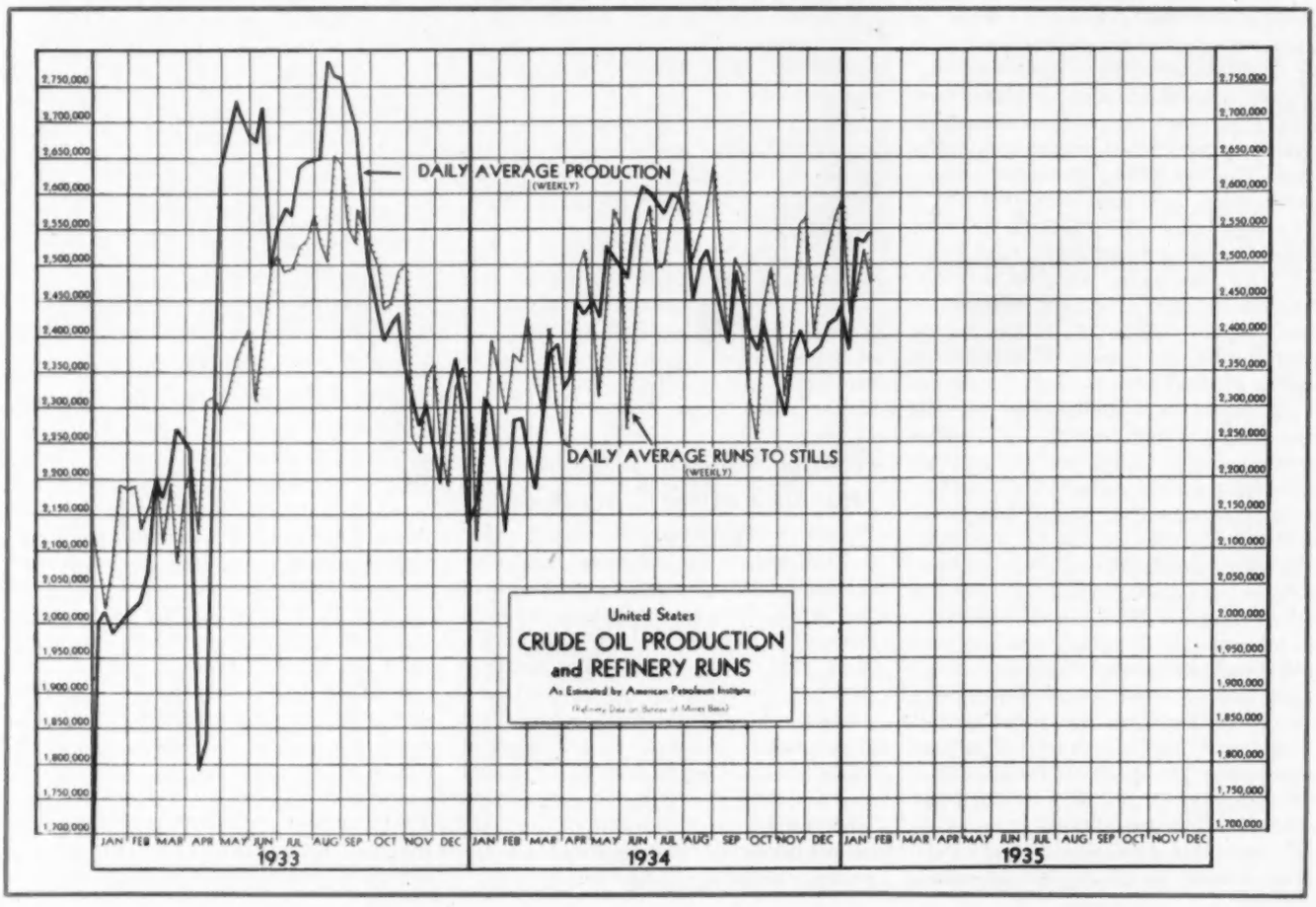
Week Ending January 27, 1935

Products—	No. Cars	Estimated Gallons
Gasoline	999	8,090,334
Fuel Oil	317	2,985,160
Topped crude	138	1,240,856
Casinghead Gasoline	131	1,128,851
Kerosene	83	670,450
Distillate	79	650,555
Gas oil	58	469,794
Residuum	35	321,719
Crude oil	17	150,970
Total	1,857	15,708,689
Total prev. week	1,389	12,052,114
Coastwise	827	
Interstate	572	
Intrastate	458	
Total	1,857	
Tendered	1,073	
Untendered	784	
Total	1,857	

Texas Areas Increase Natural Gasoline Output

Wichita Falls, Texas.—An aggregate of 9,641,000 barrels of natural gasoline was produced during 1934 by the plants in the Panhandle, North and West Central Texas districts. Both districts accounted for a big gain in output during the past year. Expansion of the casinghead gas and so-called dry gas stripper plants in the Panhandle boosted the total output for the year to 6,976,550 barrels, with an all time record production of 691,310 barrels during December.

Natural gasoline production in North and West Central Texas amounted to a total of 242,600 barrels in December. The district finished the year with a gain of approximately 47,400 barrels above the previous year, with only one new plant added. However, the gain was largely due to increased production of rich gas from acid treated wells.



Production Drops Sharply Falling Below Allowable

UNITED STATES crude oil production declined last week to a level 108,575 barrels lower than the previous week's daily output, and it was 25,450 barrels per day below the national allowable as fixed by the federal government.

For the new week, that is, the period ending February 2, the nation's output averaged 2,434,850 barrels per day, compared with 2,543,425 barrels the preceding week, and an allowable of 2,460,300 barrels daily.

The substantial decline for the week of February 2 as compared with the week before was due primarily to lower output in California and Oklahoma. Those states were following the customary trend, by which output is usually at a relatively high level early in each month, but lower in compensation later in the month.

California was down 37,000 barrels below the previous week's production rate, having 473,000 barrels daily, compared with 510,000 barrels the previous week. The new rate virtually coincided with the state's federal allocation, which was 473,900 barrels per day.

Oklahoma showed an even greater drop, having been off 68,625 barrels per day, in averaging 441,325 barrels daily. The state was 47,975 barrels a day under the federal allocation of 489,300 barrels daily. In the preceding week Oklahoma production had averaged 509,950 barrels daily.

Kansas was also among the states showing lower production last week, having averaged 137,225 barrels daily, or nearly 4000 barrels a day less than in the previous week, the new output being practically in conformity with the federal allocation to the state.

Texas and Louisiana, the other two of the five leading oil producing states, showed slightly higher production last week. The Texas output, exclusive of surreptitiously produced, and unreported production, averaged 1,013,000 barrels daily, up 3000 barrels from the previous week, and about 6000 barrels a day more than the federal allocation to Texas.

Louisiana averaged 110,100 barrels daily, or 1200 barrels a day more than in the previous week, and about 10,000 barrels more than the federal allocation, although about the amount permitted by the state authorities.

The above figures do not include estimates on surreptitiously produced crude oil, covering which reports naturally vary considerably. Such production is occurring chiefly in the East Texas field, and last week was estimated to be averaging around 40,000 barrels daily, or about 10,000 barrels a day more than in the previous week. Counting such production, the national output last week was indicated to be around 2,474,850 barrels daily, which was only about 14,000 barrels a day more than the allowable. That grand total of production, including the surreptitiously produced material, was about 100,000 barrels a day higher than the previous week's total of 2,573,425 barrels a day.

Dismiss California Code Violation Suits

Los Angeles.—Charges against several oil companies of California alleging violation of the Code of Fair Competition for the Petroleum Industry field some months ago, have been dismissed at orders of Assistant Attorney General Joseph B. Keenan. It had been charged that affiliated companies had been permitted to sell gasoline at a lower price than posted for similar grades of motor fuel by the parent companies. Since the filing of the suits, practices objected to have been discontinued.

California Markets Continue Strong

THE marketing situation in California and on the West Coast closed the old year and started the new in the best condition known for several years. For several months there has been no break in either the gasoline or crude oil market, and fuel oils have tended to increase in strength.

The movement of all products in foreign trade in tankers and in cases has been most satisfactory. This is especially true of fuel oil, but gasoline also moved in fair quantities. Crude oil field prices are holding to the dollar average and as January closes, there is no indication that prices will change in the near future. Naturally, the producers would like a higher price, but this does not seem to be in the cards at present.

The operation of the marketing sales agency, operating under the code, is largely responsible for the stable gasoline market. Third-grade gasoline is holding at 15.5 cents retail in Southern California, giving the refiner a net back of about eight cents. Small refiners sell their surplus product to the agency at about seven cents. Apparently this price is satisfactory, and gives them a small profit.

Large companies with stocks of fuel oil on hand are refusing to sell in large

United States Crude Oil Production

Estimates Compiled by The Oil Weekly

District or State	Barrels Daily for Week Ending Feb. 2	Jan. 26
TEXAS—		
Texas Panhandle	62,800	61,200
North Texas	56,800	57,100
West Central Texas	26,100	26,300
West Texas	154,200	155,200
East Central Texas	51,600	51,700
East Texas Field	*429,700	*428,100
South Texas	57,500	57,100
Texas Gulf Coast	174,300	173,600
Total Texas	1,013,000	1,010,300
OKLAHOMA—		
Oklahoma City	117,600	186,800
Seminole Area	103,100	116,075
Tatums	5,000	5,000
Lucien	10,325	8,975
Fitts	14,625	
Others	190,675	193,100
Total Oklahoma	441,325	509,950
KANSAS—		
Ritz-Canton	9,425	9,625
Voshell	5,675	6,375
Nikkel-Hollow	12,465	12,475
Sedgwick	9,175	9,325
	20,875	
Others	79,600	103,175
Total Kansas	137,225	140,975
LOUISIANA—		
North Louisiana	23,600	23,100
Louisiana Gulf Coast	86,500	85,800
Total Louisiana	110,100	108,900
ARKANSAS	29,600	30,100
CALIFORNIA—		
Long Beach	54,500	62,000
Santa Fe Springs	35,500	37,000
Huntington Beach	33,000	35,500
Dominguez	20,000	19,000
Inglewood	8,500	9,500
Ventura Avenue	24,500	24,000
Seal Beach	6,000	7,500
Midway-Sunset	50,000	54,000
Elwood	8,000	8,000
Kettleman Hills	74,000	76,000
Mountain View	20,000	22,000
Playa del Rey	8,500	9,000
Others	130,500	146,500
Total California	473,000	510,000
MOUNTAIN STATES—		
Wyoming	33,800	34,600
Montana	12,100	12,100
Colorado	3,800	3,900
Total Rocky Mountain States	49,700	50,600
NEW MEXICO	48,500	48,900
EASTERN STATES	101,200	103,200
MICHIGAN	31,200	30,500
Total United States	*2,434,850	*2,543,425
*Surreptitiously produced oil in East Texas (not included in above figures, estimated at	40,000	30,000
Grand Total, including surreptitious production	2,474,850	2,573,425

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks and Cracked Gasoline Production, Week Ended January 26, 1935.

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	417	71.6	4,796	8,485	13,281	743	220	11,551	496	471	95.0	76
Appalachian	150	140	93.3	89	63.6	991	1,013	2,004	281	45	1,212	69	69	100.0	23
Ind., Ill., Ky.	446	422	94.6	323	76.5	4,136	4,023	8,159	676	70	4,761	325	309	95.1	95
Okla., Kans., Mo.	461	386	83.7	246	63.7	2,984	1,809	4,793	522	425	4,004	256	238	93.0	60
Inland Texas	351	167	47.6	90	53.9	1,165	123	1,288	220	465	1,813	82	66	80.5	25
Texas Gulf	601	587	97.7	478	81.4	5,487	240	5,727	1,256	110	9,477	358	355	99.2	100
Louisiana Gulf	168	162	96.4	120	74.1	847	368	1,215	228	.....	4,135	71	71	100.0	19
North La.,—Ark.	92	77	83.7	40	51.9	188	62	250	36	30	477	41	38	92.7	7
Rocky Mounatin	96	64	66.7	42	65.6	737	.....	737	103	50	736	46	42	91.3	10
California	848	822	96.9	454	55.2	8,226	2,208	10,434	898	2,650	65,845	209	209	100.0	50
TOTALS WEEK: January 26, 1935	3,795	3,409	89.8	2,299	67.4	29,557	18,331	47,888	4,963	4,065	104,011	1,953	1,868	95.6	465
January 19, 1935	3,795	3,409	89.8	2,347	68.8	28,688	18,307	46,995	5,096	4,190	106,034	1,953	1,868	95.6	473

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Ended Jan. 26, 1935, compared with Jan. 1934 Bureau figures.

Estimate B. of M. Basis Jan. 26, 1935	2,475		515
Estimate B. of M. Basis Jan. 19, 1935	2,520		525
U. S. B. of M. January 1934: Daily Average Crude Runs	2,307	U. S. B. of M. January 1934: Daily Average Cracked Prod.	473

(a)Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b)Estimated. Includes Unblended Natural Gasoline at refineries and plants; also Blended Motor Fuel at plants.

Summary of Field Results Week Ending January 26, 1935

State	Completions	Oil Wells	Gas Wells	Failures	Init. Prod.
Arkansas	3	3	0	0	345
California	17	16	0	1	35,915
Kansas	15	10	0	5	10,180
Kentucky	8	5	1	2	150
Louisiana	19	6	1	12	0
Michigan	3	3	0	0	825
New Mexico	7	3	1	3	13,390
Ohio	34	11	11	12	75
Oklahoma	34	16	3	15	102,984
Pennsylvania	2	2	0	0	20
Texas	172	124	6	42	442,210
West Va.	7	1	4	2	50
Total	321	200	27	94	606,144

Comparison of Permits Granted for New Wells

State	Week Ending Jan. 26	Total this month	Total this year	Total this date last year	1934 year total
Arkansas	1	16	16	7	100
California	15	43	43	33	629
Louisiana	10	49	49	71	799
Kansas	27	113	113	58	1,015
Michigan	4	36	36	30	460
Oklahoma	36	156	156	126	2,045
Texas	444	1,080	1,080	516	10,550
Total	537	1,493	1,493	841	15,598

444 New Wells Start in Texas

Austin, Texas.—Last week the Texas Railroad Commission approved permits for the drilling of 444 new wells in Texas, 22 less than the all-time record established for the week ending December 26.

Increased drilling activities by major companies in the East Texas field accounted for 105 of the 173 new permits granted there. There were permits for 92 wells in Gregg County, 65 in Rusk County, 10 in Smith County and six in Upshur County.

North Texas also showed a marked increase, with 100 new permits allowed. Archer County operators obtained 55 permits, and there were 27 in Young County. In the adjacent West Central Texas district only 11 were approved.

In Southwest Texas activities almost doubled, as compared with the previous week. There were 58 wells allowed. Webb County reported 16 and there were 10 in Bee County. The remainder were scattered over a wide area. The Gulf Coast district listed 16 permits with eight in Harris County.

Increased activity in West Texas was indicated by the 45 new locations made. Ward County led the list with 14 permits. The Panhandle remained about the same with 14 new permits approved.

Legislature to Hear Utility Bills Today

Austin, Texas.—Hearings on all utility bills so far introduced in the Texas legislature have been set for Monday, February 4.

Action on the Tennyson bill providing abolition of the ready-to-serve charge made by gas companies, on which a hearing was held last week, was delayed until the other bills are heard.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to February 1, 1935)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*$1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.08			5-26-34
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9-1-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.20			1- 4-35
Sw Pa. Pipe Line	*1.87			1- 4-35
Eureka Pipe Line	*1.82			1- 4-35
Buckeye Pipe Line	*1.72			1- 4-35
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Big Increase Shown in Canadian Crude Recovery

Canada's crude petroleum production in November, 1934, was recorded at 113,228 barrels, as compared with 122,056 barrels in October and 108,323 barrels in November, 1933, according to a statement just issued by the Dominion Bureau of Statistics at Ottawa. During the first 11 months of 1934 the Canadian output totaled 1,301,697 barrels, or an increase of 24.1 percent over the production in the corresponding months of 1933.

In November, 1934, Alberta's output amounted to 98,638 barrels, consisting of 94,211 barrels of crude naphtha and 1775 barrels of light crude oil from the Turner Valley field, 1765 barrels of light crude oil from the Red Coulee field and 887 barrels of heavy crude from the Wainwright field.

Canada exported petroleum and its products valued at $32,144 in November, as compared with the preceding month's valuation of $16,090 and the September value of $125,279.

Petroleum, asphalt and their products imported into Canada in November were valued at $4,461,153, an increase of 11.6 percent over the October import valuation of $3,998,752. The United States accounted for 75.4 percent of the November importations; Colombia, 10.0 percent; Peru, 8.4 percent; Venezuela, 3.8 percent; Trinidad, 1.7 percent, and Germany, Belgium, British India, Great Britain, France, Alaska, Mexico, Sweden, Japan and Switzerland, the remainder. Imports of crude petroleum in its natural state into Canada in November advanced to 124,044,284 gallons from the October total of 110,637,902 gallons. The November receipts were drawn from the following sources: the United States, 88,304,278 gallons; Colombia, 15,556,340 gallons; Venezuela, 10,526,709 gallons; Peru, 7,008,672 gallons, and Trinidad, 2,648,285 gallons.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-12
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 15.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ⅛-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

KEROTEST
REGISTERED U. S. PAT. OFF.

A REAL
SPACE SAVER
KEROTEST CROSS TYPE
DRILLING VALVES

If you have not already discovered it, here's real news in high pressure drilling valves—the KEROTEST Cross Type Drilling Valve with Cross Outlets cast integral with the valve body.

It combines the advantages of a super valve with a cross at a great saving in space—provides ample clearance for attachment of flow line valves direct to outlet arms. Available in all standard sizes with either flanged or screwed ends—for test pressures from 3000 to 6000 lbs. per square inch.

Investigate this KEROTEST Product at your nearest KEROTEST Distributor.

KEROTEST
MANUFACTURING COMPANY
Pittsburgh, Pa.

KEROTEST
REGISTERED U. S. PAT. OFF.

January Brings Continued Favorable Oil Statistics

JACK LOGAN
Associate Editor

STATISTICS of the petroleum industry in the opening month of 1935 were generally favorable, the satisfastory situation of preceding months having been maintained.

Restraint continued to be exercised at wells and refineries, and supply was consequently held in conformity with requirements. Stocks of crude oil were reduced substantially; although some of the crude taken from storage was deliberately converted into gasoline that swelled the stocks of motor fuel on hand, in preparation for normal higher consumption in the spring.

Drilling was at a relatively high level, being about as in the closing months of 1934, and 20 percent greater than in January, 1934, and 60 percent greater than in January, 1933.

Crude Oil Production

United States crude oil production in January, 1935, was at sane and reasonable levels, as evidenced by the shrinkage of crude stocks. No particular significance attached, therefore, to the fact output of crude was about 44,000 barrels per day greater than the amount authorized by the federal oil administration. The January production rate was 2,504,735 barrels daily, compared with an allowable of 2,460,300 barrels.

This figure for January production is based on American Petroleum Institute weekly reports in the greater part of the month, and on estimates for the closing days of the month. The figures do not include oil surreptitiously produced. Such production has been occurring chiefly in East Texas. During January the East Texas output of that nature was indicated to have averaged between 10,000 and 30,000 barrels daily, increasing gradually to about the latter figure as the month progressed. The production was at the lower figure in the first week of the month, but then began increasing, following the Supreme Court decision in the Panama-Amazon oil control cases. In December there had been somewhat less of this contraband oil produced, averaging around 30,000 barrels daily in the first 10 days of the month, and then dropping off sharply to about the 10,000-barrel daily average, due to strengthening of state control of oil shipping.

Crude Oil Stocks

Crude oil stocks were on the downward trend in January. Evidence of the decline was furnished by the weekly reports of the federal government, as received by companies holding 100,000 barrels or more. Such stocks declined from 322,262,000 barrels December 29 to 321,121,000 barrels on hand January 19. For the closing portion of the month a similar situation is indicated, with crude output somewhat lower than in the early part of the month.

The latest official figure on total crude stocks is that of the Bureau of Mines, indicating 341,165,000 barrels on hand December 1.

Motor Fuel Stocks

In line with plans of the industry and the federal oil administration, output of gasoline by refineries continued during January in excess of current consumption, to permit building up of

Wells Completed in the United States

(Including oil wells, gas wells, and dry holes)

Month	Daily Average
January, 1933	30.0
February	30.6
March	26.6
April	25.5
May	25.6
June	21.1
July	23.1
August	30.7
September	36.5
October	40.9
November	46.9
December	47.7
January, 1934	39.7
February	38.1
March	40.6
April	44.0
May	50.7
June	51.5
July	*53.6
August	51.3
September	43.2
October	49.6
November	49.9
December	48.3
January, 1935	47.9

*Highest since July, 1930, when completions averaged 76.6 daily. Average dropped in August, 1930, to 52.4, and remained below that figure until July, 1934.

stocks in anticipation of higher demand in the spring. Approximately 3,000,000 barrels of finished gasoline were added to storage between December 29 and January 19, according to the statistics of the American Petroleum Institute. On the former date the stocks aggregated 43,969,000 barrels. By January 19 they had increased to 46,995,000 barrels.

Drilling in the United States during January was closely comparable with that in the several closing months of 1934, and as previously indicated, was substantially above the levels of the corresponding month one year and two years previously.

For the country, there were in January 47.9 well completions daily, including oil wells, gas wells, and dry holes. That average was down only fractionally from December, 1934, when completions averaged 48.3 daily. In January, 1934, the nation's completions averaged 39.7 daily, and in January, 1933, 30 per day.

The peak of drilling in 1934 involved 53.6 completions per day in July, and the low mark was the average of 39.7 daily in January. In 1933 the two extremes had been 47.7 in December and 21.1 in June.

Although the national average of drilling was slightly lower in January than in December, there were some states that showed increases. Among them were Texas, Kansas, Arkansas, and New Mexico. Slightly decreased drilling was recorded in Oklahoma, Louisiana, the Southeastern States, the Eastern States, and Michigan, and the Rocky Mountain States outside of New Mexico.

Monthly Summary of United States Drilling and Production, January, 1935

STATE	Completions	Oils Well	Gas Wells	Failures	Initial Prod. Bbls. Daily	*Total Bbls. Oil Prod.
Oklahoma	128	86	6	36	150,014	15,085,500
Kansas	80	62	1	17	45,210	4,341,400
Texas	756	529	24	203	1,943,179	31,184,150
Louisiana	59	27	6	26	13,407	3,391,600
Arkansas	20	11	.....	9	2,485	974,000
Eastern States	181	53	83	45	997	3,213,000
Michigan	27	18	2	7	964	937,000
Rocky Mountain States	10	6	.....	4	3,095	1,557,450
New Mexico	28	20	2	6	15,800	1,487,600
California	50	48	.....	2	24,285	15,475,100
Southeastern States	3	.....	1	2	.....	.....
Totals	1,342	860	125	357	2,199,436	77,646,800

*Preliminary, subject to revision.

Bill Increasing Texas Gross Oil Tax Introduced

Austin, Texas.—Representative Alfred Petsch of Fredericksburg has introduced a new bill to increase the gross production tax paid on crude oil.

Under his measure the tax would be four cents per barrel until oil reaches $1, and four percent of the value of the product thereafter.

Another bill increasing the tax had been introduced earlier in the session and provided a levy of three cents per barrel until oil sold for $1 and three percent of the value thereafter.

Validity of House Bill 99 Established Finally

Austin, Texas.—Under a ruling of the Supreme Court of Texas handed down last week the validity of House Bill 99 has been finally established.

This is the law which became effective last March requiring that refiners file certain reports to be required of refineries by the Texas Railroad Commission showing the source of crude and disposition of products in Texas.

The Third Court of Civil Appeals had previously held that the act was valid and proper, and that the orders of the railroad commission were reasonable.

The Supreme Court did not hand down a new opinion, but sustained the decision by refusing a writ of error in the case of Culver vs. Lon A. Smith.

United States Production

(Based on American Petroleum Institute estimates, which do not include oil which may have been surreptitiously produced)

Month	Daily Average (Barrels)	Federal Agency Allowable
Aug., 1933	2,748,100	.....
September	2,568,250	2,413,700
October	2,392,900	2,338,500
November	2,267,243	2,338,500
December	2,266,426	2,210,000
Jan., 1934	2,233,505	2,183,000
February	2,239,070	2,183,000
March	2,339,950	2,282,800
April	2,420,950	2,366,200
May	2,575,380	2,366,200
June	2,588,100	2,528,300
July	2,560,550	2,530,300
August	2,475,300	2,449,300
September	2,431,950	2,341,700
October	2,364,150	2,325,800
November	2,375,400	2,340,300
December	2,414,600	[1]2,307,000 [2]2,460,300
Jan. 1935	[3]2,504,735	2,460,300

[1]December 1-16.
[2]December 17-31.
[3]Preliminary, subject to revision.

Crude Oil Stocks

(Since Oil Code Inauguration)

Bureau of Mines figures as compiled monthly, comprising all crude in storage in the country.

At end of:	Total Bbls in storage
August, 1933	360,001,000
September	359,979,000
October	356,885,000
November	355,614,000
December	355,394,000 *354,305,000
January, 1934	353,642,000
February	531,641,000
March	354,067,000
April	354,350,000
May	355,883,000
June	357,239,000
July	355,260,000
August	350,838,000
September	348,937,000
October	346,415,000
November, 1934	341,165,000

*On revised basis, 1,089,000 barrels having been transferred from crude to fuel oil in California.
Trend of stocks situation since end of August figures being from weekly reports to federal government by companies *holding 100,000 barrels or more.*

November 24	326,323,000
December 29	322,262,000
January 19, 1935	321,121,000

Motor Fuel Stocks

(American Petroleum Institute figures, as shown in weekly reports)

Date	Motor Fuel stocks, bbls.
September 9, 1933	50,913,000
September 30	50,457,000
October 28	52,727,000
November 25	51,934,000
December 30	51,580,000
January 27, 1934	50,229,000
February 24	55,976,000
March 24	57,879,000
After March 24, 1934, figures shown represent stocks of finished gasoline, to be marketed as motor fuels, including natural gasoline which has been blended, and gasoline made from refinery still gases.	
March 24	57,011,000
March 31	57,098,000
April 28	56,011,000
May 26	54,493,000
June 30	51,405,000
July 28	48,597,000
August 25	46,120,000
September 29	43,850,000
October 27	41,993,000
November 17	*39,892,000
December 1	40,831,000
December 29	43,969,000
January 5	44,176,000
January 12	45,633,000
January 19	46,995,000

*Low point of year.

Confusing Injunctions Are Injected Into Texas Control Situation

(*Continued from page 11*)

the writ of temporary injunction abused its discretion by the issuance of such writ, in effect granted said oil company on an interlocutory hearing based largely upon ex parte affidavits all the relief which could have been granted upon a final hearing.

This last clause referred to the fact that the injunctions granted permitted the movement of the oil involved, and therefore by the time the case could be appealed through the courts the subject matter involved, i.e., the oil products, would have been disposed of, and even though the oil companies won, they would obtain no relief not granted in the court of original jurisdiction.

The state also planned to allege that a large share of the crude oil from which these products were derived had been produced in excess of allowables fixed by the valid proration orders of the railroad commission.

Stay orders were issued against the injunctions obtained by G. H. Burnham; Linzie Refining Company; C. D. Archer; J. M. Bradshaw; Tyler Texas Oil & Refining Company; Primrose Petroleum Company. The court was expected to issue similar orders in other cases as rapidly as the appeals could be perfected.

Last Thursday the Civil Appeals Court issued another temporary restraining order which had one important variation from the orders previously issued by the court.

In this case, which allowed the movement of "about 100,000," barrels of products, George Real had obtained an order from Judge C. A. Wheeler in the 53rd District Court.

The Civil Appeals Court order, besides containing instructions to Real not to move any of the oil pending the hearing of the case set for February 13, included the order that:

"The Hon. C. A. Wheeler, Judge of the 53rd Judicial District Court of Travis County, is ordered to show cause, if any he has, on or before said hearing date, why such writ of prohibition should not issue . . ."

The writ referred to was asked by the state to prevent, permanently, the movement of the oil.

District Courts

Meanwhile the Travis County District Courts continued to issue orders permitting movements of other products.

Robert Walker obtained an injunction in the 98th District Court to move 80,000 barrels of fuel oil. Joe Dyer, operating as Ozozo Refining Company, obtained an order permitting the movement of 189,000 barrels of crude tops. George Real was given an order to move 100,000 barrels of fuel oil. Hill Myer was granted an order to move 10,000 barrels of fuel oil. Overton Refining Company was allowed to move 49,850 barrels of crude oil, allegedly approved by the commission tender department in East Texas, but denied a tender by the tender board.

In each instance operators obtained a temporary restraining order. Under this order a hearing on an application for temporary injunction must be set down 10 days in advance, and the case cannot be appealed until this hearing has been held.

Under another injunction granted in the 53rd District Court, Tyler Texas Oil & Refining Company was permitted to move 109,531 barrels of gasoline and 31,966 barrels of fuel oil.

This case varied somewhat from the others. The movement of the oil had been permitted under one of the first group of injunctions issuing from this court. Subsequently, according to the petition filed by the operator, the railroad commission approved a tender. Later commission agents attempted to halt the movement of the oil, and the injunction issued in the second case restrained commission agents from interfering with its transportation. On the following day the Civil Appeals Court issued its stay order restraining the movement of the oil pending the final outcome of the litigation.

Federal Courts

One of the first suits filed by the new Attorney General, Wm. McCraw, was an action seeking to enjoin every railroad in Texas from moving any oil without a tender approved by the Texas Railroad Commission.

Injunctions applying to some 30 roads were issued by Judge J. D. Moore in the 98th District Court. On the following day these cases were transferred to the federal courts by the railroads, on the grounds that most of the defendant railroad companies were foreign corporations and therefore entitled to the jurisdiction of the federal court. This action, however, had no effect upon the injunctions, which continued in effect.

Last Tuesday Federal Judge R. J. McMillan modified these injunctions after hearing, permitting the railroads to move that oil which had been released under injunctions granted by the state district courts.

The following day three of the operators who had obtained relief under these orders were back before the federal judge. The state brought in affidavits alleging that although these operators had represented to the state court that the oil involved was owned by them and in their possession before the processed oil order was issued, the oil actually belonged to other parties at that time and was held by them.

As a result of these showings, the court ruled that these operators could not intervene in the suit brought by the state against the railroads, and that the injunctions issued by the state court preventing the railroads from moving their oil should remain in effect.

The other cases were set for hearing on the merits.

Attorney General Wm. McCraw has proceeded energetically in the prosecution of these suits. Eight assistants have been assigned to oil work only and most of their work has been confined to cases involving the movements of untendered oil.

President Authorized to Invite to Houston Show

Washington, D. C.—Cognizant of the fact that it will be the only oil exposition in the world during 1935, President Franklin D. Roosevelt, upon a resolution by the Congress, January 23, authorized and is inviting all the states of the union and all foreign countries to participate in the Oil Equipment & Engineering Exposition at Houston, Texas, to be held April 8-13, 1935, inclusive.

The President of the United States is authorized to invite by proclamation, or in such other manner as he may deem proper, the states of the union and all foreign countries to participate in the proposed Oil Equipment and Engineering Exposition, to be held at Houston, Texas, from April 8 to April 13, 1935, inclusive, for the purpose of exhibiting samples of fabricated and raw products of all countries used in the petroleum industry and bringing together buyers and sellers for promotion of trade and commerce in such products.

All articles that shall be imported from foreign countries for the sole purpose of exhibition at the Oil Equipment and Engineering Exposition upon which there shall be a tariff or customs duty shall be admitted free of the payment of duty, customs, or charges, under such regulations as the Secretary of the Treasury shall prescribe; but it shall be lawful at any

time during the exhibition to sell any goods or property imported for and actually on exhibition, subject to such regulations for the security of the revenue and for the collection of import duties as the Secretary of the Treasury may prescribe: Provided, that all such articles when sold or withdrawn for consumption or use in the United States shall be subject to the duty, if any, imposed upon such articles by the revenue laws in force at the date of withdrawal; and on such articles which shall have suffered diminution or deterioration from incidental handling and necessary exposure, the duty, if paid, shall be assessed according to the appraised value at the time of withdrawal for consumption or use, and the penalties prescribed by law shall be enforced against any person guilty of any illegal sale, use, or withdrawal.

The government of the United States is not by this resolution obligated to any expense in connection with the holding of such exposition and is not hereafter to be obligated other than for suitable representation thereat.

Development Plans for Two Fields Approved

Washington, D. C.—Development plans for the Cayuga pool in Texas and the Abbeyville field, Kansas, for 1935, were approved by the Oil Administration this week.

The Cayuga program calls for continuance of the 1934 drilling rate until 75 oil wells shall have been completed, at which time a new plan for the number of wells to be drilled during the ensuing year shall be submitted.

In the Abbeyville field, the 1934 program of limiting drilling to not more than eight wells, with not more than one well to 40 acres, is to be continued, with a new plan outlining the drilling program for 1936 to be submitted by December 10, next.

I. P. A. A. Annual Meeting To Be in November

Dallas, Texas.—Sixth annual meeting of the Independent Petroleum Association of America will be held here November 4 and 5, according to an announcement made January 28 by C. E. Bucher, Tulsa, executive manager, following a conference with local oil leaders and officials of the Dallas Chamber of Commerce. Selection of Dallas as the next convention city for this independent oil organization was approved at annual meeting held in Fort Worth last December, but the fixing of the meeting dates was deferred by the board of directors.

Proration Lifted in Six Oklahoma Pools

Oklahoma City.—Performance of six Class B pools on open flow tests during the 31 days of January leads to the belief that many of the older pools soon will be removed from the prorated list and that some of the newer pools may be given higher percentages of allowable. During January it is reported these pools, one in southern Oklahoma and the others in the general Seminole district, failed to make their rated potentials. As a result open flow will be permitted during February and four Seminole pools were added to the unrestricted list. It is the plan of the commission as rapidly as possible to open the older prorated pools for open flow tests of one month duration. Those which do not greatly exceed their previously established allowables probably will be permitted to remain on open flow.

February allowable for Oklahoma pools was set at 497,100 barrels daily, an increase of 7800 barrels daily over January allowables. Increases granted in the St. Louis pool, the Oklahoma City Wilcox zone, two Class C pools and to new wildcat or Class D pools were offset by decreases in unprorated and voluntarily prorated pools and in the Seminole et al group of Class B.

Oklahoma Pipe Line Runs 175,000,000 Barrels 1934

Oklahoma City.—Preliminary figures released by the Oklahoma Corporation Commission through the proration department show pipe line runs for December to have fallen short of the federal allocation by a total of 199,547 barrels or a daily average of 6437 barrels. Principal cause for the underage was a deficiency in the Simpson zone of the Oklahoma City pool where daily average pipe line runs were 4219 barrels under the allocation and the unprorated areas which were 9273 barrels under the allocation. The Wilcox zone of the Oklahoma City pool was overrun by a daily average of 3999 barrels and the St. Louis area of the Seminole district by a daily average of 2634 barrels. In the other areas of the state the greatest overage was 770 barrels daily and the greatest underage was 734 barrels daily.

Based on preliminary December figures which are subject to slight revision and on final figures for the preceding 11 months, 1934 pipe line runs for the state were shown to be 175,090,383 barrels, a monthly average of 14,590,865 barrels, or a daily average of 479,700 barrels. High point of the year was reached in May when total runs for the month were 16,067,889 barrels and the low point in February when total runs were 12,920,071 barrels. Comparison with federal allocations shows overages from January to July, inclusive, and in October and underages in August, September, November and December. Total overage for the year was 4,726,992 barrels and total underage 952,003 barrels, a net overage of 3,774,989 barrels. A large percent of this was in the unprorated areas where it was impossible to accurately predetermine the requirements prior to the preparation of orders. With the proration department functioning smoothly as at present it is safe to predict that Oklahoma will be within its federal allocation when figures for 1935 are available.

Oklahoma Initial Output Registers Large Increase

Tulsa.—Initial production from 16 new Oklahoma oil wells was almost twice that of any week during the past year as six wells in the Fitts pool of southeastern Pontotoc County boosted the total to 102,984 barrels. The total for Fitts was 95,968 barrels of which 66,256 barrels were from three wells completed by Carter Oil Company. Completion reports included three dry gas wells with combined initial production of 14,000,000 cubic feet, two locations abandoned and 13 dry holes, a total of 34 for the week. This activity involved 106,394 feet of drilling, including 490 feet in one old well. One test in Pottawatomie County and one in Seminole County was drilled into water and plugged back.

Renewed activity in the Naval Reserve and South Burbank pools placed Osage County in the lead with 10 first reports; Pontotoc and Pottawatomie were tied for second with four each; Oklahoma and Seminole counties had three each; Okmulgee County, two; and Cleveland, Comanche, Jefferson, Kay, Lincoln, Logan, Noble, Okfuskee, Stephens and Tulsa counties, one each. This was a total of 36 first reports from 16 counties compared to 51 from 21 counties during the preceding week.

Wide Play Precipitated In Southwestern Oklahoma

Altus, Okla.—Gypsy Oil Company's Kelly 1-B, SW SW NE 10-1n-20w, discovery well in the new Altus pool of southeastern Jackson County, received connections during the week and was expected to test more fully as soon as tankage was available. This is the second producer completed by this operator, the other, Kelly 1-A, NEc 10-1n-20w, being a 350,000-cubic foot gasser at 1170 feet. Kelly 1-B, the first oil well in the pool, made 289 barrels in 19 hours from uncorrelated sand at 1405 to 1435 feet.

This activity has precipitated a play

which extends from southwestern Tillman County, northwestward through Jackson County and into Greer County, a belt about 50 miles long and several miles wide. The influx of oil men has overloaded Altus hotels and many visitors are being accommodated in Frederick and Mangum. Lease and royalty prices have mounted steadily and in the most highly prospective areas prices have gone beyond the speculative stage. Shallow depth of the sand and the fact that this area is practically unexplored are attracting oil men from all over Oklahoma and from many North Texas areas.

Oklahoma Completions

Company, Well and Location	Init. Bbls.	Prod. Depth
COMANCHE COUNTY—		
Ashcraft & Palmer, Clark 1, nw nw nw se 28-2n-10w	*	485
CREEK COUNTY—		
A. B. Ice, Harris 4, nw nw se se 12-17n-10e	*	2320
W. C. McBride, Inc., Starr 31, nw nw se se 8-18n-7e	80	2504
HUGHES COUNTY—		
Potoc Oil Co., Dixon 2, se nw nw 12-9n-8e	¶4½	1491
Fitzpatrick & Griggs, Dixon 1-A, nw sw ne 12-9n-8e	¶4½	1485
Sunray Oil Co., Jacobs 2, ne nw nw 15-7n-8e (otd 2935)	*	3425
JEFFERSON COUNTY—		
O. V. Beck, W. D. Seay 5, ne sw nw se 34-6s-5w	30	1610
Bridwell Oil Co., W. & D. Seay 1, nw nw nw 22-6s-6w	*	2378
LINCOLN COUNTY—		
Sinclair Prairie Oil Co., Norton 4, sw se ne 7-14n-4e	*	5033
LOGAN COUNTY—		
Gallagher et al, James 1, se ne ne 11-18n-4w	lcn.	abd.
MARSHALL COUNTY—		
Centrop Oil Co., Everett 1, nw nw nw nw 36-7s-5e	*	675
OKFUSKEE COUNTY—		
Carter Oil Co., King 1, cne sw 2-11n-8e	150	3930
Delton Oil Co., Robinson 1, ne ne ne 18-11n-8e	*	2255
OKLAHOMA COUNTY—		
J. C. Shaffer et al, Bullard 1, sw sw sw 13-13n-2w	*	6542
Ray Stephens, Cooper 1, cel se se nw 22-11n-3w	1596	6520
Springrose Drilling Co., Edwards 1, cse se 19-11n-1e	*	6540
OSAGE COUNTY—		
Gypsy Oil Co., Barker 2, ne ne sw 12-23n-7e	60	2904
Lewis Prod. Co., 6, ne nw nw 21-24n-7e	lcn	abn.
Kasishke, Inc., 4, ne ne nw nw 21-25n-6e	80	2768
PONTOTOC COUNTY—		
Carter Oil Co., Craddock 3, sw se ne 25-2n-6e	¶8-27,360	4325
Craddock 4, ne se ne 25-2n-6e	¶3-27,840	4370
Magnolia Pet. Co., T. Norris 4, se sw ne 25-2n-6e	¶6-18,000	4308
Stanolind Oil & Gas Co., Norris "E" 2, se sw se 25-2n-6e	4512	4315
Carter Oil Co., D. Hardin 2, nw ne sw 30-2n-7e	11,056	4215
Deep Rock Oil Co., Hardin 2, sw se ne 30-2n-7e	7200	4234
POTTAWATOMIE COUNTY—		
Vivian Oil Co., Atchley 2, se nw ne 1-6n-4e	569	4191
Hylton Phillips, Bradshaw 3, nw sw se 21-7n-4e (pb 4165)	323	4170
Phillips Pet. Co., Windall 1, nw sw ne 8-10n-4e	*	5629
SEMINOLE COUNTY—		
J. E. Hall & Gentner, Miller 1, nw nw se nw 36-6n-7e	*	4170
Magnolia Pet. Co., E. Reed 4, sw se se 30-7n-8e (pb 3120)	400	3128
Empire Oil & Refining Co., Myers 3, sw ne ne 31-7n-8e	3728	4251
TULSA COUNTY—		
Harris-Hays, Clinton 1-A, nw nw ne se 6-16n-14e	*	2200
Mechling, McIntosh 3, se se sw nw 13-17n-14e	*	1872
WAGONER COUNTY—		
R. Marrs, Davis 1-A, se sw ne ne 14-17n-15e	¶5	1086

*Failures; †Junked; ¶Million cu. ft. gas.

Kingfisher Wildcat Going Deeper After Finding Show

Columbia, Okla. — Attention was shifted for a time during the week to Kingfisher County, where Black Gold Petroleum Company picked up a showing of oil and gas in Cole 1, C SW NE 24-18n-5w, one and one half miles east of here and two miles west of the Lovell pool in the northeastern part of the county. The show was reported from 5413 to 5429 feet from an uncorrelated sand, thought to be below the Layton series. Coring from 5429 to 5430 feet operators recovered six inches of shale and were drilling ahead below 5440 feet. The test is nearing contract depth and the showing came as a surprise.

Noble County Wildcat Flows 418 Barrels 17 Hours

Otoe, Okla.—Marathon Oil Company's Gilbert 1, C NE NE NE 24-22n-2e, seven and one half miles east of here in eastern Noble County, was shut in for pipe line connections with all tanks full after flowing 418 barrels in 17 hours from Second Wilcox sand at 4449 to 4480 feet. Only eight feet of sand is open hole, 6⅝-inch casing having been set at 4472 feet.

This wildcat discovery is the probable forerunner of considerable development in the area since it is thought by many to be on the edge of an important accumulation.

Logan County Wildcat May Be Running High

Guthrie, Okla.—Shell Petroleum Corporation et al's Hinzel 1, C SE SW SW 7-16n-2w, less than a half mile southwest of here in south central Logan County, cored sand from 4825 to 4835 feet and from 4850 to 4859 feet, both yielding an odor. It was drilling ahead below 4900 feet.

This important wildcat test picked up the Layton series at 4185 feet and Checkerboard lime at 4615 feet, and interval somewhat less than that of the Oklahoma City section. It is reported running high.

Polo Well Flowing 100 Barrels Hourly

Perry, Okla.—Sinclair Prairie Oil Company's Smith 4, C NE SE NE 28-22n-2w, in the northern portion of the Polo pool, seven miles northwest of here in western Noble County, was flowing at the rate of approximately 100 barrels per hour on potential test. Total depth is 4894 feet in Wilcox sand. Smith 3, C SE NE NE 28-22n-22, the north offset owned by the same operator, was standardizing after being plugged back from 4955 feet, where it encountered water and had all the earmarks of a small edge well.

Garfield County

Billings, Okla. — Herndon Drilling Company et al staked location and started building derrick for Allen 1, C NE NE SW 35-24n-3w, two and one half miles southwest of here on the Nemaha trend, between the Garber and Retta pools, in northeastern Garfield County. Nearest production is one mile west, a small oil well owned by Shell Petroleum Corporation.

Okfuskee County

Castle, Okla.—Mid-Continent Petroleum Corporation's Haney 1, C SW SE NE 24-12n-8e, two and one half miles northwest of here and six and one half miles northeast of the new Dill pool in western Okfuskee County, topped Hunton lime at 3159 feet, stopped at 3165 feet and was preparing to run 6⅝-inch casing to test a showing of oil.

Reno Wildcat Finds Wilcox Saturated

Hutchinson, Kansas.—Johnson and Carey's Dyke 1, SE NE SE 35-22s-5w, wildcat test approximately eight miles northeast of here in northeastern Reno County, cored well saturated sand from 3968 to 3985 feet and was standardizing to test. The sand is reported as Wilcox.

New Harvey County Well Responds to Acid

Hesston, Kansas.—Imo Oil & Gas Company's Sperling 1, C SE NE NE 23-22s-2w, wildcat discovery well four miles west of here in northwestern Harvey County, was treated with 1000 gallons of hydrochloric acid early in the week and responded with a 350-barrel yield in six hours pumping. Production the first hour was 70 barrels and the second 55 barrels. The potential test was discontinued at the end of six hours when pumping equipment went out of order.

Northeastern Kansas Activity Is Increasing

Paola, Kans.—Franklin County again has taken the lead in the number of new locations and wells drilling in Northeastern Kansas. Glenn Seaborn expects to finish his well on the Shipp farm, northwest of Imes, this week. Charles Judd et al are drilling a direct west offset to Seaborn's Twining well, and two more drilling contractors, LaCygne Drilling Company and Anderson and Willis, are making locations near Imes. Anderson and Willis have staked a location northeast of the Twining well.

J. W. Lemons and Sons have two rigs in the Rantoul field, locations are known as Cora Blunk 3 and Christie 2, both two miles northwest of Rantoul. Hazen Sears et al completed a dry hole on January 28 on the Bidwell farm, 1½ miles north and east of Rantoul, at 752 feet.

Miami County has six locations with five rigs running. Kano Oil Company is drilling on its 50th well on the McCoon farm, Section 30-17n-21e. Barwick and Sands are cleaning out an old oil well on the Wallace farm along the Osawatomie-Paola highway. H. W. Mitchell is shut down at 250 feet on the E. Bare farm, near Fontana. A. L. Sides is deepening a gas well for O. F. Sodomann just east of the State Hospital. Branson and Hay are moving to a new location on the Matney farm, three miles east of Osawatomie. Hal Lambeth has a location staked just east of John Brown's lookout.

B. F. Endicott is drilling just north of Drexel, Missouri. This test will reach a shallow oil sand at approximately 185 feet and in case sufficient oil is not found, the well will be drilled deeper.

George Graham et al have completed a dry hole on the Perry Dunn farm, SE Section 27-20n-15e, Franklin County, at 1525 feet. Allen Oil Corporation's well in La Cygne fairgrounds, completed some two weeks ago, has been cleaned out after being shot and is good for five barrels daily of 30 gravity oil at 400 feet.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Stanolind Oil & Gas Co., Houser 5 csw ne 16-20s-11w	436	3293
BUTLER COUNTY—		
F. H. Unruh et al, Joseph 1, se sw nw 18-25s-4e	rig abn.	....
COWLEY COUNTY—		
Murphy, Cadwell 1, nw ne ne 7-35s-3e	79	3504
McPHERSON COUNTY—		
Aley et al, Jones 1, ne se ne 9-19s-2w	19	2375
Barnsdall Oil Co., Bridgens 1, se se se 35-19s-3w, (otd 3045)	*	3581
RENO COUNTY—		
Lario Oil & Gas Co. & Reserve Dev. Co. Shepherd 1, sw sw nw 18-22s-5w	*	4150
Skelly Oil Co., Sabin 4, se se sw 11-23s-4w	1919	3622
Derby Oil Co., Ackley 3, sw sw se 14-23s-4w	3449	3596
Olson Oil Co., Downie 4, nw nw ne 14-23s-4w	3317	3613
Olson Oil Co., Goering 7-B, cse nw 35-23s-4w	¶1-335	3371
Sinclair Prairie Oil Co., Carmichael 1, cwl ne nw 15-24s-4w (pb 3385)	25	3405
RUSH COUNTY—		
Boyle, Wilhelm 1, sw sw se 8-19s-16w	*	3946
RUSSELL COUNTY—		
Texas Co., M. Neidenthal 1, ne se ne 23-14s-15w	465	3255
SEDGWICK COUNTY—		
Dickey Oil Co., Brown 1, nw nw ne 20-28s-1e	137	3119
WOODSON COUNTY—		
Nye, Rhea 1-A, ne se ne ne 13-24s-13e	*	1672

*Failures; †Junked; ¶Million cu. ft. gas.

Burrton-Haury Pool Leads Kansas Operations

Wichita, Kansas.—The Burrton-Haury pool of northeastern Reno County continued to lead Kansas both in new production and starts. Of the total of 10,181 barrels of new production from 10 wells over the state, five wells in Burrton-Haury added 9020 barrels and contributed 11 of the 27 first reports. Ellsworth and Russell counties were runners-up with four first reports each; Rice County had three; and Barton, Butler, Harvey, McPherson and Scott counties, one each. The Scott County first report was from Atlantic Oil Producing Company's Mary E. Vaniman 1, C SE NE 15-20s-33w, discovery well in the county and westernmost oil producer in the state. It was completed about 15 days ago for 572 barrels on the pump from Mississippi lime at 4670 to 4686 feet. Intention to deepen was announced during the week. The completion report included one rig abandoned and four dry holes, a total of 15 compleitons which involved 43,457 feet of drilling, including 536 feet in one old well.

To Repressure With Shackelford County Gas

Eastland, Texas.—Gas production developed by Hope Oil & Gas Company and Roeser-Pendleton, Inc.'s W. D. Reynolds 1, situated in the Shackelford County pool, uncovered last year by Owens-Snebold Oil Corporation, is to be diverted to Roeser-Pendleton, Inc.'s gasoline manufacturing plant in the Cook field, located about four miles to the north, to be processed then included with residue gas used in repressuring the latter field. The new well, an east offset to the discovery lease in Section 23, Block 11, T&P Ry. Survey, made an initial flow of 9,000,000 cubic feet of gas from sand at 1057-1077 feet, with 350 pounds rock pressure. The flow of gas later dropped to about 5,000,000 cubic feet, and the well developed a spray of oil estimated at 20 barrels daily.

Twelve Completions In Texas Panhandle

Pampa, Texas.—Texas Panhandle added 12 completions during the past week, including a dry hole drilled by independents on a wildcat location in southern Wheeler County. Nine oil producers reported for the week were credited with a combined initial output of 2860 barrels, while two dry gas wells in Carson and Wheeler Counties offered an aggregate potential flow of 42,000,000 cubic feet daily.

Dry Holes Lead West Central Texas

Eastland, Texas.—Dry holes continue to predominate among the completions recorded in West Central Texas. Ten of the 15 completions for the past week were listed as failures, and only 40 barrels of new production was added by the three shallow oil producers added during the period. Two gas wells, rated at 1,000,000 cubic feet capacity each, were scored in Brown and Shackelford Counties.

To Take Gauges of West Texas Fields

Austin, Texas.—The Texas Railroad Commission has announced a hearing to be held at Midland on February 12 to consider methods of taking 24-hour potential tests on 30 West Texas fields. This action is in line with the policy of the commission announced some time ago to determine potentials in all fields on a uniform basis, so that allowables based on potentials might also be uniform. The following fields will be affected by the orders resulting from evidence taken at this hearing: Church and Fields; Cowden, North; Cowden, South; Crane-Cowden; Crane-Waddell; Deep Rock; Extor-Harper; Extor-Penn; Fuhrmans; Gulf-McElroy; Halley; Howard-Glasscock;

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
L. R. Hagy-Harrington & Marsh, L. C. McConnell 7	¶35	2659
HUTCHINSON COUNTY—		
Texas Co., C. R. Garner 6-A	270	3080
GRAY COUNTY—		
Danciger O&R Co., H. K. Beck-Powell 12	495	2894
Gulf, R. B. Thompson 7	370	3275
Kewanee O&G Co., J. S. Morse 3-D	185	2535
Parton & Holt, A. Chapman-Shell 1	35	2860
Skelly Oil Co., H. Schafer 19-E	350	3283
H. Schafer 20-E	335	3276
Stanolind, Cobb 2-A	120	3330
WHEELER COUNTY—		
Helena O&G Co., P. M. Keller 1	700	2397
Johnson & B. G. Barnett, Boren 1	*	2051
N. H. Martin & Son, Plummer 1	¶7	2640

*Failures; †Junked; ¶Million cu. ft. gas.

Iatan-East Howard; Leck; Loving; McCamey; McClintic; Means; Pecos Valley; Sayre; Scarborough; Sealey; Shipley; Skelly-Grayson; Taylor-Link; Todd; Tobarg; Ward, North; Ward, South; World.

4,180 Barrels New West Texas Production

San Angelo, Texas.—An aggregate of 4180 barrels of new production was added in West Texas during the past week through completion of nine wells in six counties. A single dry hole, represented by a test that has been inactive more than a year in Crane County, was also listed as a completion.

Weather Causes North Texas Completion Drop

Wichita Falls, Texas.—Volume of completions in North Texas dropped to a low level last week with a total of 24, as compared to 43 the previous week. The slump was attributed largely to recent bad weather conditions. There were 11 failures during the past week, and 13 oil producers, with a combined initial rating of 1444 barrels. All completions were drilled by independent companies and operators.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Cable Oil Co., S. Snider 32	*	347
B. Cockburn et al, R. J. Andrews 6, Sec 2437	25	1395
Fain-McGaha Oil Corp., S. C. Arnold 32	350	1209
Maro Oil Co., Ward 1	*	1020
Perkins-Cullum Oil Co., Falls County 132, Blk 11	150	1159
Ray & Staniforth, T. B. Wilson 15	300	1602
Underwood Drl. Co. et al, Ward 1-D, Sec 1374	*	1074
Weathers et al, J. S. Bridwell 1	*	950
Wichita Prod. Co., Archer County 2	10	1014
COOKE COUNTY—		
R. W. Fails et al, Powell 1	10	1338
HASKELL COUNTY—		
Weart-York (Texas Oil Ventures, Ltd.), R. V. Colbert 1	*	4139
JACK COUNTY—		
J. Gaines et al, W. H. Smith 1	5	305
MONTAGUE COUNTY—		
O. V. Beck et al, C. L. Davenport 11	350	1654
WICHITA COUNTY—		
Arrington et al, S. B. Burnett 1, Sec 7	*	748
R. R. Clark et al, Bickley 37	*	1484
Golding & Cochran, Waggoner Bros. 10-C, Blk 17	15	1394
Pet. Producers Co., First Nat'l Bank 68, Sec 28	*	469
First Nat'l Bank 1 (7-ac), Sec 28	*	667
WILBARGER COUNTY—		
Webb & Stilley, Waggoner Est. 1-C.	5	1912
YOUNG COUNTY—		
Jas. B. Baker et al, O. S. Perkins 3, Sec 206	160	742
Nash & Windfohr Oil Corp., M. K. Graham 1-A, Sec 3410	60	2697
Panhandle Ref. Co., G. P. Stewart 1	*	754
Rathke Oil Co. et al, A. E. Logan 4, Sec 2251	4	565
Hazel B. Sparks et al, R. Campbell 4-A, Sec 1389	*	950

*Failures; †Junked; ¶Million cu. ft. gas.

Big Lake and McCamey Each Extended During Week

San Angelo, Texas.—Deep pay zone in the Big Lake field yielded a new producer last week when Big Lake Oil Company's University 16-C, situated near NWc Section 25, Block 9, gauged 402 barrels of 44.3 gravity oil at 60 degree Fahr. during first 11 hours after drilling to 8450 feet. Gas production was estimated at 1,000,000 cubic feet daily. It extends the Ordovician lime producing horizon more than one quarter mile to the north, and will likely complete at the above depth. Top of Pennsylvanian lime was logged at 8328 feet, and first section of the Ordovician at 8350 feet. Hydril rotary unit was utilized in deepening below 8375 feet.

The scheduled Ordovician lime test of Skelly Oil Company et al's University-Grayson 1-D, located in the Skelly-Utah pool about seven miles southeast of the Big Lake field, is proving to be more than 1,000 feet structurally lower, and had not reached the Ordovician horizon in drilling to 9390 feet. Top of the Cisco series was placed at 9174 feet, or 6283 feet below sea level. The test is on a 5200-acre unit block, with seven participants, and the original contract called for an 8700-foot test. Indications are that unit members will continue drilling until the Ellenberger section of the Ordovician is reached. Gulf Production Company's J. T. McElroy 103, Upton County, had progressed to 11,070 feet late last week, logging black lime and chert. In Glasscock County, the unitized wildcat test of John I. Moore, Loffland Brothers et al on the L. S. McDowell ranch was drilling below 8650 feet in lime.

Production in the McCamey district, Upton County, was extended about one half mile to the northeast when Texas Pacific Coal & Oil Company and The Texas Company's J. F. Lane 1-E, NWc SW NW Section 32, Block 1, MK&T Ry. Survey, pumped 198 barrels of oil during first 12 hours through two-inch tubing from lime at 2306 feet. The Texas Company gave the former a 50 percent interest in the lease for the drilling of the outpost test. Plans are to switch to three-inch tubing to establish a larger potential rating.

Skelly Oil Company is credited with having a large oil producer in the making in drilling its second test on its S. M. Halley discovery lease of the Skelly-Halley pool, southern Winkler County. Halley 2, located one quarter mile north of the producer, logged a series of oil zones in drilling sandy-lime at 2800-2907 feet, resulting in the hole filling 2500 feet with oil. Top of lime was reported at 2400 feet, and first sand section at 2550 feet, with an elevation of 2726 feet, thus placing it about 40 feet higher on structure than the discovery well, which was completed at 3112 feet flowing 387 barrels through casing. Sun Oil Company has started a test a short distance to the northwest. Sid Richardson et al's M. J. Hill 1, situated two miles to the northeast of the wildcat producer, developed hole full of sulphur water in deepening to 3846 feet. Plans are to plug back and try for an oil producer in the 3100-foot sandy-lime horizon.

Joe C. Maxwell and Atlantic Oil Producing Company's Oscar Clapp 1, semi-wildcat on the east side of the Hendrick field, Winkler County, encountered sulphur water at the 3400-foot level, with increased yield in drilling to 3455 feet. It is located in SEc NE Section 37, Block B-26, PSL Survey, and will be plugged back for a shot of nitro in sandy-lime showing oil at 3187-94 feet, with assurance of gas production at the 2600-foot level. Fox-Butler et al's Brown-Altman 1, second semi-wildcat for the area, has not succeeded in clearing up fishing job in oil zone at 3098 feet.

Three new wildcat projects for An-

West Central Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
A. D. Bruce et al, John Geddes 1	¶1	1603
Mook-Texas Oil Co.-Gunn Prod. Co., A. M. Martin 1	*	1638
CALLAHAN COUNTY—		
Jas. V. Wright et al, H. H. Ramsey 1	*	1405
COLEMAN COUNTY—		
Daniels et al, L. L. Shields 1	*	1115
R. E. Groves et al, Polk Bros. 1	*	1327
Putman Oil Co. & L. L. Shead, Reeves 1	*	1386
COMANCHE COUNTY—		
H. B. Phillips et al, J. A. Thompson 1	*	555
PALO PINTO COUNTY—		
Lee W. Johnson et al, J. M. Baucam 1	*	920
SHACKELFORD COUNTY—		
Charter Oil Co., Morris-Buie 6-A	15	1632
Dobbs Oil Co., J. G. Smith 1	*	1100
Frontier Prod. Co., J. H. Nail 2	10	1365
Gilman & McMurry, E. A. Jeter 12	¶1	635
Grisham-Hunter Corp., Dora E.Ward 5	15	2128
Texas Consolidated Oil Co.-Jones-Stasney, W. D. Baker 1	*	1912
STEPHENS COUNTY—		
W. L. Andrews et al, fee 2	*	2297

*Failures; †Junked; ¶Million cu. ft. gas.

drews County are in process of being rounded out, including two by E. M. Wahlenmaier and associates in the north portion of the county. Location has tentatively been made for Odessa Ranch Company 1, C NE Section 10, Block A-32, PSL Survey, for a 4750-foot test on acreage contributed by The Texas Company and others. One major company is credited with having subscribed $10,000 for lease on two 320-acre tracts. Wahlenmaier et al are also considering the drilling of a test about 2½ miles to the east and near C NW Section 8, Block A-33, PSL Survey, with Humble Oil & Refining Company contributing leases and casn towards the financing of the test. R. H. Gill and associates are assembling a drilling block on a line between the Deep Rock-Ogden pool and the Means field, with a tentative location for Section 26, Block A-36, PSL Survey.

Fuhrman Petroleum Corporation, Midland, is reported to be contemplating the drilling of a wildcat on a recently acquired block of about 12,000 acres in west central Martin County. The block centers on Leagues 247 and 248, Hartley County School Land Survey.

West Central Texas Men to Meet Tomorrow

Breckenridge, Texas.—Annual meeting of the West Central Texas Oil & Gas Association will be held here February 5. Wirt Franklin, president of the Independent Petroleum Association of America, and Chas. F. Roeser, head of Roeser-Pendleton, Inc., Fort Worth, both members of the Planning and Coordination Committee, are to be guest speakers at the banquet to be given by local oil men honoring the visitors.

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CRANE COUNTY—		
Loffland Bros. et al, T. B. Tubb-Gulf 1	*	4510
FISHER COUNTY—		
Southern Oil Corp., A. E. Pardue 2-B	700	3105
HOWARD COUNTY—		
Taylor-Link Oil Co., TP Land Trust 3	1105	2350
PECOS COUNTY (Taylor-Link Field)—		
Shell, University 3-D	85	1645
RUNNELS COUNTY—		
Hall Oil Co., Brevard-Golden 1	100	2529
Pet. Oil Interests, Inc.-Watts Bros., Brevard 4-B	125	2510
UPTON COUNTY—		
TP Coal & Oil Co.-The Texas Co., J. F. Lane 1-E	400	2306
WARD COUNTY—		
California Co., B. D. Durgin 22	255	2543
Sid Richardson et al, Johnson-Sun 12-B	385	2588
Johnson-Sun 15-B	1025	2590

*Failures; †Junked; ¶Million cu. ft. gas.

Woodbine Shows Oil In Harrison County

Marshall, Texas.—Harrison County may yet be added to the list of oil producing counties in East Texas. Many dry holes, most of which were abandoned in Georgetown lime without picking up the Woodbine, were drilled after the discovery of East Texas.

Last week 5 3/16-inch casing was cemented in Bergendall and associates' Buchanan 1, W. H. McIlvain Survey, three miles from Hallsville, after a reported oil show in what was identified as Woodbine sand at 3682 feet. A core was cut from 3677 to 3682 feet only a few inches of which was recovered but it was reported to have shown oil. Elevation is 350 feet.

Williams and Beck of Houston, Texas, who recently assembled a 2000-acre block in the northeast part of Marion County, and plan a 6000-foot test have let contract for the test to Oxenholt Drilling Company of Longview. This block centers in the John Drummond, William Mays and John Whitney Surveys.

In the southwest corner of Panola County and extending over into Rusk County, H. C. Flinchbaugh and associates of Shreveport have assembled a 5000-acre block centering in the James P. McAdams Survey.

Arkansas-Louisiana Gas Company's seismograph crew working in Marion County is now doing detail work in the R. Waller, J. Grayson, Robert Maxwell and adjacent surveys.

Just west of the Caddo Parish, Louisiana, oil field, T. W. Taylor of Jefferson, Texas, has assembled a 2000-acre block with a drilling obligation to start by April 15 on a 2500-foot test. The block centers in the M. G. Noll, Abram Moore and adjacent surveys.

East Field Operations Are on Upward Trend

Tyler, Texas.—Volume of completions in the East Texas field tapered off last week as a sequel to a recent spell of bad weather. Field work is assuming greater proportions, with a number of companies engaged in development work on a large scale in order to bring up their average well density. Operations are under way on approximately 185 tests.

The field accounted for 59 completions last week, including one test junked while running casing to complete. There were six non-flowing wells added during the week.

Revival of drilling operations on a large scale within the past month has been noted on properties of Humble Oil & Refining Company, largest lease owners, Marathon Oil Company, Magnolia Petroleum Company, Sun Oil Company, Shell Petroleum Corporation, Sinclair Prairie Oil Company and The Texas Company. Marathon Oil Company is credited with 31 operations, consisting of five drilling tests; four rigs and 22 locations, with 446 completed wells. Magnolia Petroleum Company has eight drilling tests; six derricks and rigs, and 15 locations. Sun Oil Company has seven tests underway, and is moving in on five others, with a number of additional locations authorized.

The use of cable tools to drill in and complete wells is becoming more widespread among East Texas operators in developing leases in the low-pressure areas and those near the water table on the west and north flanks of the structure. This is proving economical in sections of the field confronted with low reservoir pressure as natural flow can be started without prolonged swabbing. Wells drilled near the oil-water contact usually require only about one foot of sand penetration to make producers, and for this reason the machine is proving practical in literally scratching the top of the oil horizon.

Sun Oil Company used machines in completing two of its wells last week, and by doing so scored a flowing well on an offset to a pumper. This company's E. F. Johnson 3, situated on south line of 80-acre lease, H. Cooper Survey, Upshur County, used machine in penetrating the sand three feet, and the well gauged 17 barrels of oil in 15 minutes through casing. It was drilled to 3646 feet, or 3317 feet below sea level. The same company's M. M. Burns 2, located near the water level in Smith County, used machine to drill two feet into the sand to a total depth of 3764 feet. The hole filled 1800 feet with fluid, with some salt water showing, and will be equipped to pump.

Camp Hill Gas Well Hinges on Water Shutoff

Palestine, Texas.—Completion of a commercial gasser by Gulf Production Company's Royall-Davey 1, wildcat on the Camp Hill structure, Anderson County, hinges on a renewed effort to attain a water shutoff. Gas production passed up in the Sub-Clarksville sand section of the Eagleford shale at 5045-5066 feet was revived after plugging back from Georgetown lime at 5948-5969 feet to 5080 feet, indicating a yield estimated at about 8,000,000 cubic feet daily, with trace of distillate and considerable salt water. The hole has since been plugged back

with cement to 5060 feet for another try at making a producer.

Woodbine sand section logged at 5176-5948 feet, with an elevation of 572 feet, by this wildcat carried salt water, but failed to offer any promise of oil or gas production. The well is located in NWc of 174-acre lease, M. Rogers Survey, and about 2¾ miles west by north of Byrd-Frost, Inc., and Stanolind Oil & Gas Company's Alice Scott 1, Jas. Crawford Survey, which produced small volume of oil with heavy flow of salt water in Woodbine sand at 5455-5501 feet. Gulf Production Company has a big investment in leases and royalty interests in the Camp Hill area, and is starting a second test about one mile to the south of its original project to drill in the SEc of the Mary J. Ross 54.7-acre lease, Robert Erwin Survey.

Pioneer Exploration Company and E. B. LaRue are to proceed shortly with the drilling of a wildcat to the Woodbine horizon in Henderson County about one mile southwest of Athens. Location is to be on the Gentry tract, C. M. Walters Survey.

Wm. C. McGlothlin, Corsicana, and others have made location for the drilling of a shallow wildcat about two miles north of Corsicana, Navarro County.

Plugging orders have been issued by Humble Oil & Refining Company for its Hill County wildcat on the Citizens National Bank of Denison 170-acre tract, N. T. Roberts Survey, about 2½ miles northeast of Mount Calm, after logging Del Rio shale at 1285-1286 feet.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Arcadia Ref. Co., J. R. Green 9-A (55.56-ac)	4800	3760
G. B. R. Oil Corp., L. Harmon 10 (26.87-ac)	8600	3825
Humble, John Bell 11 (65.55-ac)	9000	3808
R. T. Cameron 6 (50-ac)	7200	3711
P. R. DeGuerin 15 (134.3-ac)	6500	3765
Emma W. Naulls 9 (74.94-ac)	1500	3685
Marathon Oil Co., E. E. Moores 21 (201.4-ac)	5400	3671
Restal Drlg. Co.-E. C. Laster, J. P. Maxwell 4 (18.53-ac)	480	3625
J. P. Maxwell 5 (18.53-ac)	750	3600
Sinclair Prairie, Mayfield 28-A (374.74-ac)	1500	3754
E. E. Moore 4 (97-ac)	†	3734
F. B. Wilson 12 (124-ac)	9000	3661
Texas Co., L. J. Pinkston 13 (79.45-ac)	5700	3678
Texas State Oil Co. (was Professional, T. O. Wright 1	7600	3685
KILGORE AREA—		
Atlantic, L. P. Griffin 16 (85-ac)	7200	3600
Cimarron Oil Co. (A. L. Rogers), Lively 1 (1-ac)	9100	3638
Dan W. Francis et al, J. Elder 1 (1¼-ac)	10,000	3624
Gulf, C. Brown 33 (263.52-ac)	6500	3570
Kathleen Oil Co., J. N. Peterson 7 (16-ac)	9500	3660
Lewis Prod Co.-Selby O&G Co. Tom Bean 10 (43-ac)	7600	3650
Magnolia, Jess Blackman 3 (20-ac)	9700	3625
J. C. Bradberry 14 (90-ac)	11,000	3692
S. E. Brox 7 (84-ac)	8000	3660
Restal Drlg. Co. (was P. A. Saunders), F. A. Taylor 1 (10-ac)	480	3670
Roberts Bros. et al, Blackwell 2-C.	7200	3654
Shell Pet. Corp., John Douglas 13-A (94.45-ac)	7500	3593
J. S. King 9-A (57.27-ac)	7600	3612
Texas Co., Wiley Davis 9 (64-ac)	7200	3560
R. B. Walls 11 (104-ac)	7300	3710
Tide Water Oil Co., J. S. Bean 14-A (128.44-ac)	11,000	3695
Trentman Oil Co., Presbyterian Church 2, Lot No. 7	160	3553
Uscan Oil Co., Lillie Morse 3 (5-ac)	8000	3638
R. L. Wheelock-Collins et al, D. Wells 16 (120-ac)	1000	3700
LONGVIEW AREA—		
Atlantic, T. B. Harris 11 (91.54-ac)	7200	3556
J. J. Repond 6 (50-ac)	6800	3694
Bishop Oil Corp., E. G. Richey 6 (25.86-ac)	8000	3582
L. C. Collins-Gray & Wolfe, C. Fisher-Shell 3 (133.22-ac)	9000	3448
E. & D. Oil Co., Thos. Wells 8 (51.4-ac)	7100	3721
Fain-McGaha Oil Corp., R. Corbin 6 (40-ac)	9600	3597
Gulf, J. H. Bozeman 15 (111-ac)	8800	3630
G. W. Dunbar 1 (98-ac)	160	3594
M. O. Sheppard 40 (375.8-ac)	6200	3505
Humble, J. K. Edwards 26 (271.6-ac)	7500	3669
Magnolia, G. W. Tate 7 (66.6-ac)	9000	3442
Margay Oil Corp., Tom Christian 6-A (25-ac)	9600	3705
E. J. Moran et al, Wm. Harley 2 (5.01-ac)	9500	3599
Rancho Oil Co., E. G. Richey 3 (12.76-ac)	11,000	3605
Roeser-Pendleton, Inc., J. E. Sheffield 6 (49.1-ac)	6800	3650
Selby O&G Co.-Lewis Prod. Co., Snavely 13-D (105-ac)	9000	3596
Shasta Oil Co., E. G. Richey 5-B (24-ac)	8000	3567
Shasta Pet. Finance Corp., T. D. Campbell 7-A (56¼-ac)	7000	3636
Shell, W. M. Landers 5 (65.16-ac)	5900	3703
Stanolind, L. C. Ingram 9 (80-ac)	9000	3598
Stanolind-Simms Oil Co., O. J. Albright 10 (90.6-ac)	9200	3629
Sun Oil Co., E. F. Johnson 3 (80-ac)	2000	3646
T. C. Ramey 6 (90-ac)	350	3795
Tide Water, F. K. Lathrop 2 (25-ac)	3600	3626
G. H. Vaughn Prod. Co., Geo. Jones-Ambrose 6 (10-ac)	11,500	3607
Yount-Lee, McKinley Bros. 3-D (54.47-ac)	8500	3601
MISCELLANEOUS		
ANDERSON COUNTY (Cayuga Field)—		
Tide Water Oil Co.-Texas Seaboard Oil Co., G. W. Ware 5 (571.65-ac)	3000	4094
N. N. Wills 15-A (832.29-ac)	2500	4092
VAN ZANDT COUNTY (Van Field)—		
Humble, Mrs. E. E. Carroll 8 (98-ac)	8000	2924
A. J. Fowler 7-X (95-ac)	2	1146
Shell, I. P. Tunnell 9 (23-ac)	11,000	2945
Pure, N. E. Clark 11 (94½-ac)	7000	2941
WILDCATS		
HILL COUNTY—		
Humble, Citizens Nat'l Bank 1	*	1286
SMITH COUNTY—		
R. W. Fair et al, W. P. Rushing 1	*	4673

*Failures; †Junked; ¶Million cu. ft. gas.

Loma Novio Field Is Extended Half Mile South

San Antonio, Texas.—A one half mile southeast extension to the Loma Novio field, Duval County, was provided by the Magnolia Petroleum Company's Herbst 2, northwest corner of Section 70. It swabbed 22 barrels of oil in 15 hours from sand at 2742-49 feet. Work is continuing in an effort to increase the flow.

Humble Oil & Refining Company's Mucio Vela 1, Section 42, west offset to the same company's Ruiz 1, discovery well, also is a producer. It is standing full of oil at 2804 feet, waiting on pumping euipment. Sand was topped at 2788 feet. The discovery well pumped 50 barrels of salt water and a like amount of oil per day from this sand. Humble Oil & Refining Company has spudded Vela 2, one location west of Vela 1. These wells are being drilled in a line to the west in an effort to go up dip and nearer the top of the structure where flowing wells are expected.

Barbacoas Area Tests Disappointing

San Antonio, Texas.—Efforts to develop an oil field in the Barbacoas area of Starr County are meeting with little success, although the area gives promise of being an important producer. Two sands have been opened, but subsequent tests drilled in the vicinity of the producers show salt water.

Merren, Johnson & Bond's Starr County Cattle Company 3, SE W½ Block 37, Porcion 89, showed salt water in the first sand at 2508-15 feet and again at 2696-2709 feet. The well is just south of an oil producer in the 2500-foot sand and a 2700-foot gasser.

Some distance farther south, Conway & Emanuel's Starr County Cattle Company 1, SE Block 59, Porcion 89, is coring at 2515 feet.

San Antonio, Texas.—Couple of small wells were added to Escobas field, Zapata County, during the week. SR & C Oil Corporation's M. T. Trevino 7-E, Block 12, Survey 65, made 50 barrels at 1250 feet. The Texas Company's Measles 62, Cerrito Blanco Grant, was good for 20 barrels initial from sand at 1174-92 feet. Measles 63 is drilling.

San Antonio, Texas.—Amerada Petroleum Company is installing a blowout preventer at 3250 feet in Halff & Oppenheimer 3, Frio County. It is north 45 degrees east 500 feet from No. 2, J. H. Gilman survey No. 16, five miles southwest of Pearsall. The No. 2 made a producer at 3915 feet in the Navarro sand, opening a new field.

South Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BEE COUNTY—		
Mills Bennett, Tuleta Mercantile Co. 1, nw sw sec 10 (W. Tuleta)	200	3906
Blanco Oil Co. & Al Buchanan, P. Perez 2-A, se sec 9, (W. Tuleta) pb 3917 ft	300	3924
Houston Oil Co., Strauss 2, blk 6, sw sec 9 (W. Tuleta)	300	3990
Edwin M. Jones, Skinner-Harris 4, e nw sec 10 (W. Tuleta)	300	3941
L. W. Stieren, W. H. Fox 4, Wm. Gill sur, 330 ft sl and el of 120-ac tr (Worth)	*	3586
BASTROP COUNTY—		
Mrs. Florence East, G. Madrigal 2, 2790 ft sl, 990 ft wl Share B, R. G. Salinas Gr., (Alta Mesa)..	*	1600
CALDWELL COUNTY—		
McNeil Pet. Co., J. W. Miears 1, 660 ft nwl, 700 ft swl 327-ac tr, W. C. Swearingen sur (Dale) ..	*	2401
Moseley et al, J. M. Pierce 1, 150 ft nwl, 750 ft nel of 100-ac tr, S. Seal sur (Dunlap)	*	2205
DUVAL COUNTY—		
Magnolia, Hahl-Norton 4, w sw sec 61 (Gov't Wells)	500	2330
D. Ruiz 3, sec 127 (Sarnosa)	200	2442
Salt Dome Oil Co.'s L. B. Moody 2-B, sec 60 (Gov't Wells)	180	2366
Southwest Drlg. Co., Cuellar 4, 330 ft swl and nwl NE sec 114 (Hoffman)	*	3003
Wendt 16, SE sec 43 (Gov't Wells)	750	2274
E. R. Thomas, Bishop Duval Cattle Co. 1, S sec 135 (Gov't Wells)....	*	2865
GUADALUPE COUNTY—		
Walton & Weinert (Diamond Half), C. Hoffman 1, 640 ft nel, 1850 ft sel Wakefield & Stewart sur, near Kingsbury	*	2617
HIDALGO COUNTY—		
J. M. Newman et al, A. F. de Flores 2, Tr. 275, Por. 40 (Samfordyce)	350	2773
Reserve Development Co., Seabury 1, Tr. 256, Por. 38 (Samfordyce).	550	2774
Union Sulphur Co., J. C. Engelman 1, 400 ft sl and wl lot 3, blk 79, Mastena Gr.	*	7508
Windsor Oil Co., Dr. J. M. Doss 1, Tr. 278, Por. 40	725	2754
JIM HOGG COUNTY—		
The Texas Co., Gutierrez 1, 1763 ft sl, 330 ft wl Sec 165	*	3361
LIVE OAK COUNTY—		
Durbin et al, Marbach 3, 220 ft nwl, 500 ft nel 423 ac tr, Stephens Hays sur	*	894
MAVERICK COUNTY—		
George Andrews, Matthews 1, midway between nl and sl, 150 ft wl 40-ac tr, B. C. Flowers sur.....	*	482
REFUGIO COUNTY—		
D. D. Oil Co., Fannie Heard 3, N. S. Crunk sur (Greta)	425	5983
Hewitt & Daugherty, M. F. Lambert 15, Hardwick sur (Greta)	275	4382
Pearson Properties, Inc., Ryalls Est. 1-B, Refugio town Tracts (Refugio)	¶5-90	5729
Santa Clara Oil Co., Mattie Woods 1, 466 ft nl and el of nw sec 8, Jose McGehaus sur	*	6381
VICTORIA COUNTY—		
Nutex Oil Co., J. Zimmer 3, R. Manchola Gr. (Coleto Creek)	120	2815
WEBB COUNTY—		
Sun Oil Co., A. M. Bruni 8, blk 5, sec 5, Arispe Gr. (Cole)	425	3425
ZAPATA COUNTY—		
O. W. Killam, A. M. Bruni 9, 180 ft sel, 400 ft nel blk 9, Blas Uribe Tr., Borrego Gr.	*	2000
SR&C Oil Co., M. T. Trevino 7-E, blk 12, sur 65 (Escobas)	50	1250
The Texas Co., Measles 62, Cerrito Blanco Gr. (Escobas)	20	1192

*Failures; †Junked; ¶Million cu. ft. gas.

New Bee County Strike; West Tuleta Activity Up

San Antonio, Texas.—Dirks Brothers scored their third consecutive strike in Bee County late in the week when Foley 1, western portion of the county, showed for at least a gasser in the Hockleyensis sand at 3408-27 feet. A drill stem test lasting 12 minutes developed 400 pounds pressure and showed some oil and mud.

The well is 330 feet from the north and west lines of the Keeler survey, 1½ miles northwest of Simms Oil Company's Holzmark 1, discovery well of the Friendship field, which made a 56,000,000 cubic feet wet gasser at about the same level several years ago.

The test topped the sand at 3408 feet and at 3418 feet, a drill stem test was attempted, the result being 300 pounds pressure with about one half gallon mud, showing specks of oil. Deepened, it showed increase of pressure and oil. Tests were made through ¼-inch bottom choke and 5/16-inch top choke.

This is the third discovery made by Dirks Brothers, all within less than a year and as successive wildcats. The first was the discovery of the West Tuleta field, the second the Dirks pool west of the Tuleta area and now the new strike. The West Tuleta field already has been developed into probably the best producer in the entire Pettus district. Only one well has been drilled in the Dirks pool, that being the discovery. Dirks Brothers and their associates own approximately 1200 acres in the drilling block on which the Dirks pool discovery well was drilled. They are at this time negotiating for the sale of this block on the basis of $1,000 per acre, half cash and half oil.

All three of the discovery wells were drilled by George McMurray Drilling Company of San Antonio.

The West Tuleta field has reached the peak of activity with 11 active tests, including derricks or wells actually drilling. These operations are well divided, the largest number of wells drilled by any one operator being only two.

Several producers were added during the week. Mills Bennett's Tuleta Mercantile Company 1, NW SW Section 10, flowed 135 barrels per day through 3/16-inch choke from 3906 feet, showing tubing pressure of 850 pounds and casing pressure 1200 pounds. Sand was topped at 3886 feet and seven-inch casing set at 3887 feet. His Silcock 2 is drilling below 3700 feet.

Blanco Oil Company and Buchanan's P. Perez 2-A, SE Section 9, south extension well for the field, flowed about 10 barrels an hour through ¼-inch choke from new depth of 3917 feet. It topped the sand at 3904 feet, drilled to 3924 feet, but showed some water and was plugged back, whipstocked out and drilled to its new depth.

Heyser, Heard & Walton's Walton 2, Block 13, SW Section 9, is in process of completion at 3926-52 feet.

Houston Oil Company's Strauss 2, Block 6, SW Section 9, was completed in the lower Pettus sand at 3981-90 feet, showing an initial flow of 10 barrels per hour on 3/16-inch choke. Strauss 3, Block 2, NW Section 20, is drilling around 3700 feet and will start coring shortly.

K. F. Hasselman's Sparrow 1, Block 4, NE Section 20, apparently is a producer. It has the sand at 3962-78 feet and is reaming for a drill stem test.

Edwin M. Jones' Skinner Harris 4, E NW Section 10, is good for 350 barrels per day on ¼-inch choke from 3941 feet. Sand was topped at 3912 feet and casing set at 3933 feet. Skinner Harris 6 is in the sand at 3907-30 feet with casing set at 3921 feet. It looks like an average well.

Tuleta Oil Company topped the sand at 3884 feet in Skinner Harris 5, NW Section 10, and is coring ahead.

Cole Field Being Developed Rapidly

San Antonio, Texas.—Cole field's deep sand area, centering around the town of Bruni, Webb County, is being rapidly drilled. As a result, it may be expected that several important outpost locations will be shortly announced. Outside of the immediate producing area, the majority of the close in acreage is held by Magnolia Petroleum Company, O. W. Killam and Cole Petroleum Company, each of which are at present running rigs in the proved area.

Sun Oil Company added an excellent producer in A. M. Bruni 8, Block 5, Section 5, flowing 15 barrels an hour through ¼-inch choke on tubing. Sand was cored from 3406-25 feet, the bottom of the hole. This is the company's third flowing well. The fourth, Bruni 3, is waiting on pumping equipment at 3436 feet. Bruni 4 is drilling and Bruni 5, 6 and 7 are locations.

Highland Oil Company is drilling be-

low 2600 feet in Bruni 4, Section 17, its second well in the field. The company has a rather extensive development campaign planned on its 300-acre lease.

American Liberty Oil Company's Bruni 12-A, Block 44, Section 8, is near the sand, while Bruni 8-A, Section 6, is at a shallow depth.

Herman Brown is coring for the sand in Bruni 5, Block 1, Section 5. This well likely completes his drilling campaign in the field. He has lease on portion of another 10-acre tract, but may not be able to obtain a permit for its drilling.

Cole Petroleum Company has spudded Benavides 90, Callaghan Homestead tract, and has location for 91. Just south of these wells, O. W. Killam is drilling below 1000 feet in A. M. Bruni 31, Section 6. Peerless Oil & Gas Company and Lamar G. Seeligson's A. M. Bruni 1, Section 6, new operation for the field, is rigging up.

Just southeast of this 3400-foot area, but in Duval County, Magnolia Petroleum Company is completing another well in the 2800-foot sand. It is S. Benavides 7, which has the sand at 2806-14 feet. Plugs have been drilled.

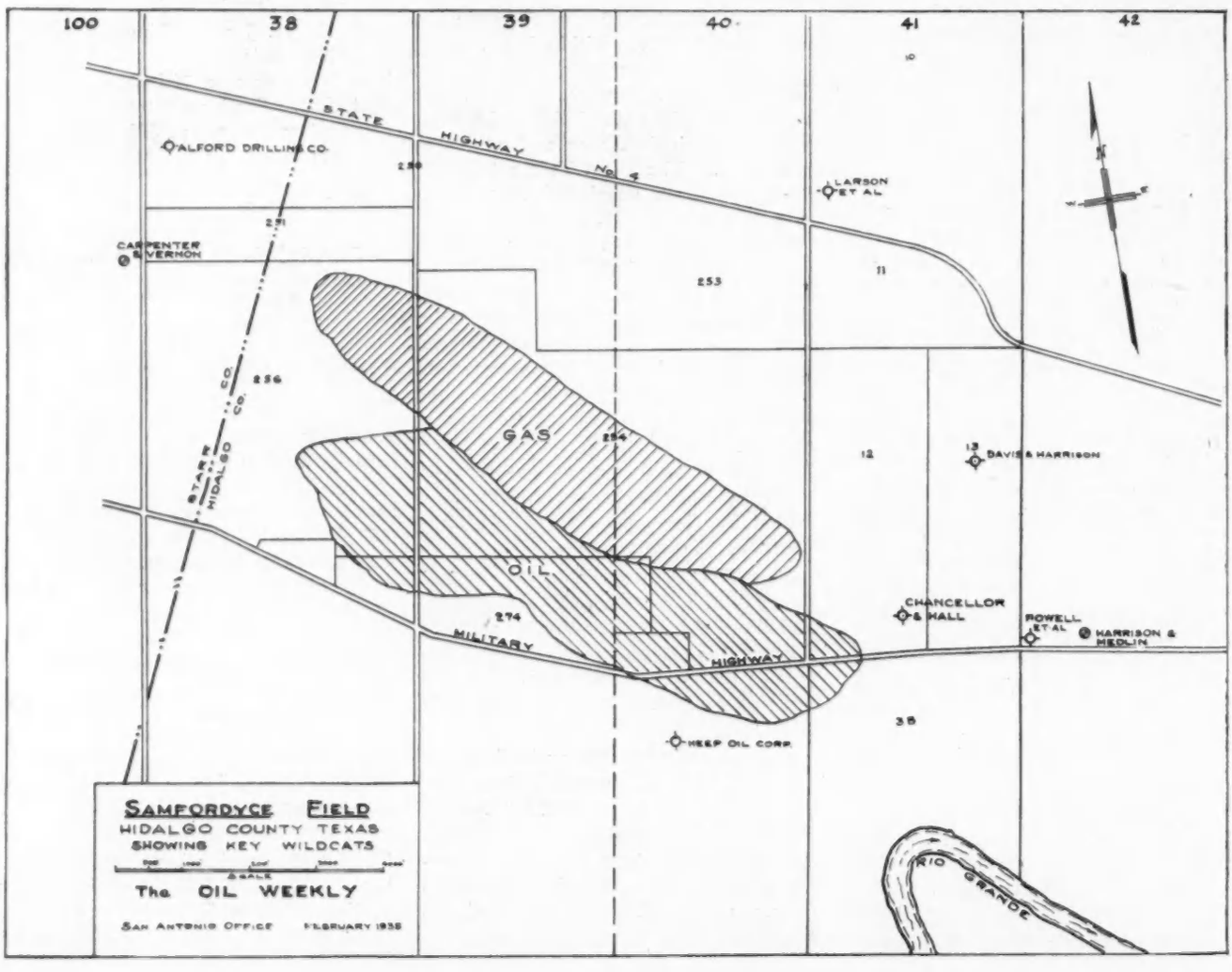
Two Important Samfordyce Wildcats at Decisive Depths

San Antonio, Texas. — Samfordyce field's two wildcat wells, one east and another northwest, hold the interest in this Hidalgo County area. Both wells are in important locations and may lead to the development of considerable new producing territory.

About 6500 feet northwest of the field and in Starr County, Carpenter and Vernon et al's Garcia Land and Cattle Company 1 is due to core the sand shortly. It was down 2600 feet at last reports. The well is 330 feet from the east line of Porcion 100 and 2717 feet south of State Highway No. 4. It is slightly more than 2,000 feet southwest of a test drilled several months ago by Alford Drilling Company. This well showed a little gas in the Samfordyce sand, it is said.

The other important test is Harrison & Medlin's Garcia Land and Cattle Company 1, located 330 feet north of the Military road and 1000 feet east of the west line of Porcion 42. This well topped the Samfordyce gas sand at 2716 feet and cored a section of sandy shale, streaks of sand, etc., to 2772 feet, where a drill stem test failed to develop anything interesting. It is drilling ahead to another sand, which was encountered in Powell's Garcia et al 1 at 3050-76 feet. This well, located 850 feet west of the Harrison & Medlin test, showed for production at that level when drilled several years ago.

The field generally is being extended location by location both to the northeast and southwest. Several more producers were completed in each section of the field during the week, bringing the total number of oil producers to 32. In addition, several gas wells have been completed on the northeast side of the



field, while several more showed for big gassers on drill stem test and have been plugged. These gas wells have more or less blocked development to the north and northeast. The only recent well drilled in that direction was Larsen et al's Salinas, just north of State Highway 4, which showed some gas in the Samfordyce sand at 2800 feet and was abandoned.

The trend seems definitely directed toward the Mexican border, which is less than one half mile southeast of the producing limits of the field. Whether or not it will cross likely will be determined within a short time due to the active drilling campaign in the southeastern portion of the field.

The deepest test thus far drilled in the field is Heep Oil Corporation's W. R. Jackson 1, which was abandoned at 5554 feet in the Jackson. It tested salt water in the Samfordyce sand, but failed to pick up anything of interest farther down. With a derrick floor elevation of 140 feet, it topped the Vicksburg at 3198 feet and the Jackson at 4610 feet.

Outlet Provided For Bruni Field

San Antonio, Texas.—Tidewater outlet was provided for the Bruni townsite area of the Cole field, Webb County, through a deal between American Liberty Oil Company and Humble Pipe Line Company. American Liberty Oil Company has leased two 55,990-barrel tanks at the Humble Bruni tank farm and has constructed a line from the field to the tank farm. Humble Pipe Line Company is to transport the crude from its tank farm to Inglesides for coastwide shipment. The transportation charge, it is understood, is 18 cents per barrel.

Five Rigs Running In Greta Field

San Antonio, Texas.—Although the Greta field, Refugio County, apparently is near the end of its development, five rigs are still running to drill up remaining locations. The week's development included two new producers, one in the 4400-foot sand and another at the 5900-foot level.

D. D. Oil Company's Fannie Heard 3, Crunk survey, is rated at 15 barrels an hour on choke from 5933 feet, while Hewitt & Daugherty's Lambert 15, Hardwick survey is a 10-barrel an hour well at 4382 feet.

Atlantic Oil Producing Company and Stanolind Oil and Gas Company's J. M. O'Brien 3-F is drilling at 3712 feet. Hewitt and Daugherty have spudded in M. F. Lambert 16, Block 14, Hardwick survey. Humble Oil & Refining Company's J. F. B. Heard 18, John Peoples survey, is drilling at 1213 feet and Standard Oil Company of Kansas has spudded in Tom O'Connor 3, Crunk survey.

Quintana Petroleum Company is continuing its activity in the Tomoconnor pool just east of Greta. O'Connor 5-A is coring for the 5900-foot sand. O'Connor 6-A is about ready to spud. Both are in Swisher survey No. 4. The company's O'Connor 2-B, wildcat in the White survey, is coring below 7825 feet.

Four Deep Wildcats Hold San Patricio Interest

San Antonio, Texas.—Four deep wildcat tests in San Patricio County are expected to throw a new light on the two new producing areas in that county. They center around the Sinton-Angelita sector.

Heep Oil Corporation's Welder 1B, NW 154-acre tract, Portillo survey, south of the Sinton field, and just north of the town of Sinton, is drilling at 4630 feet. It will test the regular sand, and likely will go ahead to the new

FOR SAFETY TO CREW AND WELL

SPECIFY THE

McEVOY BLOWOUT PREVENTER INSERTER

Mechanically operates standard types of Packing Assemblies under derrick floor

CERTAINTY OF SEALING. When it is considered that often the entire investment in a well in a high pressure area is at stake the reliability and quickness of operation of the McEVOY BLOWOUT PREVENTER INSERTER are two factors that win the favor of efficient oil men.

SIMPLY PULL LEVER AND PRESSURE GUN SHOOTS PACKING ASSEMBLY AROUND PIPE.

EASY TO RETRACT.

Only ten to thirty minutes are required for two men to change assembly for different pipe sizes.

Does not obsolete standard Hosmer Type equipment, but improves it. The new mechanism is attached to your present equipment.

EXTREMELY ECONOMICAL

WRITE FOR NEW McEVOY CATALOG

NRA CODE

J. H. McEVOY & CO.
Established 1906
Texas Ave. at Milby St.,
HOUSTON, TEXAS

See pages 631 to 638 in the 1935 Composite Catalog.

Seventy - five pounds of millings recovered by the Cavins in one run.

It Gets WHAT IT GOES AFTER

THE CAVINS is absolutely dependable in operation. It gets what you send it after. It breaks hard packed sand bridges and cleans the pipe perforations, or screens, thoroughly. Saves time, labor, production and money. It's the modern way, the easiest way, and the best way to clean out and recover such "fish" as pins, cones, discs, slips, and ordinary junk like pieces of rubber, iron, steel and wood weighing up to 40 lbs. Write for Bulletin and further detailed information.

The CAVINS

THE CAVINS COMPANY
2853 Cherry Ave., Long Beach, Calif., U. S. A.
Cable Address: "Cavins, Long Beach"
R. J. Eiche, Foreign Representative
BRANCHES AT
Taft, Bakersfield, Goleta and Santa Paula, Calif.
Cavins Clean-Out Service:
Oklahoma City, Okla., and McPherson, Kansas
Cavins Bailer Service:
Houston and Kilgore, Texas, and Shreveport, La.

level at 5880 feet, where Heep recently opened a second producing horizon.

Plymouth Oil Company's E. H. Welder 2-B, Musquiz survey, is drilling at 6515 feet, and will start coring shortly for the 6600-foot sand shown in Heep's well drilled on the east side of the field. This well topped the regular sand at 5380 feet and showed for a gasser. It failed to develop anything in the 5800-foot sand. The well is southwest of the field and is in an important location.

Four miles west and one mile south of Sinton, Stanolind Oil and Gas Company is rigging up J. J. McMillan 1, lot 12, Fulton Pasture subdivision of the P. Fitzsimmons survey.

Humble Oil & Refining Company is drilling below 2180 feet in Welder 1, located 6,000 feet west of the Angelita field discovery well. Several tests have been drilled in the area, but the discovery well is the only one that resulted in a producer.

Coleto Creek Field

San Antonio, Texas.—Nutex Oil Company's J. Zimmer 3, R. Manchola Grant, is rated at five barrels an hour through choke from sand at 2810-15 feet. It is in the Coleto Creek field of Victoria County.

A rather active development campaign is resulting from these excellent shallow completions. Nutex Oil Company has made location for Zimmer 4, Plummer Drilling Company is ready to start another test on the Terrell lease. Jones and Corrigan are moving in material for Pribyl 1. Houston Oil Company has made location for Urban 2, while Cox & Hopper are preparing to start Zimmer 2.

Harris County

Houston.—Cockburn & Frazier's Herman Hospital 1, 900 feet north and 300 feet west of the southeast corner of 488-acre tract and approximately 13,250 feet from the north line and 300 feet from the east line of Wm. Hardin Survey, Harris County, was moving in rig at the close of the week. Turnbull & Irwin will drill the well and receive a cash consideration and a spread around the well for the drilling of the test.

Hill & Hill, Inc., have made location for a test on the C. R. Wharton land in the W.C. R.R. Survey, Harris County. The well is located 466 feet from the north and west line of Section 5 and being approximately two and half miles west of Fairbanks.

It is reported that another Cockfield test will be drilled in the area where W. U. Paul's House 1 was abandoned. The well was finaled at 7329 feet where the operators had a fishing job. Acreage is being sold to finance the test.

Dickinson Test Waiting on Cement

Houston.—Humble Oil & Refining Company's A. F. Danielson 1, approximately 2500 feet southeast of the discovery well for the Dickinson field, Galveston County, was waiting on cement to set at the end of the week at 7438 feet.

This test is the highest one in the field and is reported to be running from 160 feet to 200 feet higher than the discovery well. It topped the Discorbis at 6360 feet, Heterostegina 6630 and Marginulina at 6784 feet. When this well is completed as a producer it will be the third producer for the field.

The well is located 566 feet west of the east line, 385 feet south of the north line of 20-acre tract in the J. Sellers Survey.

The same operator's E. Schaffer 1, 3500 feet south of the discovery well, W. K. Wilson League, was drilling in shale at 3645 feet at the end of the week, while W. J. Jones 1, J. S. Sherman Survey, was waiting on cement to set at 231 feet.

Humble Oil & Refining Company has made location for Maco Stewart A-2, 566 feet from the east line; 3324 feet from the northeast corner of 911-acre tract in the J. Sellers Survey.

Pure Oil Company's Schelor 1, 2800 feet north of the discovery well, B.B.B. & C. Survey, was cutting and pulling tubing at the close of the week preparing to deepen 30 feet.

Port Neches Field

Houston. — The third Marginulina producer is due for completion in the Port Neches field of Orange County the coming week. The Texas Company's Polk 3-B, 200 feet south and 450 feet west of the southeast corner of Mary E. Hall Survey No. 2, set liner and screen at the close of the week.

The operators have an oil sand from 5927 to 5930 feet. The well is running a little lower than the discovery well for the new sand in the field and is located approximately 2000 feet west of the discovery well.

Matagorda County

Houston.—Cockburn Oil Company's Hawkins 6, Sheppards Mott, D. McCarthy Survey, Matagorda County, was drilling in heaving shale at 5484 feet at the end of the week, having topped the Discorbis at 4731 feet and the Heterostegina at 4940 feet and is considered a high well for the area.

A sand that showed oil was encountered from 5168 to 5178 feet and on a drill stem test from the above depth the well showed one fourble of greasy mud through a quarter-inch choke on top and bottom in five minutes.

Katy Wildcat Is to Be Tested

Houston.—Stanolind Oil & Gas Company was preparing to run an electrical logging device at the close of the week and then make a drill stem test of Thorp 1, due west of Katy, M. Bennett Survey, before abandoning providing the survey of the hole and the test proves unsatisfactory.

The bottom of the hole is 7647 feet in the Cook Mountain, being in that formation approximately 169 feet. The operators have failed to pick up any appreciable body of sand.

The above test and Humble Oil & Refining Company's Woodley 11-X, approximately 15 miles northwest of Thorp 1 and in the Raccoon Bend field of Austin County, are two of the more important tests on the Gulf Coast. Thorp 1 has picked up a sandy section in the Cook Mountain and below the top of the Cockfield whereas the Woodley 11-X, failed to find any sandy section below the top of the Cockfield. The operators drilled to 6946 feet before picking up the sandy section. At the close of the week Woodley 11-X, was down to 7069 feet. The test topped the Cockfield at minus 3728 feet, Upper Saline Bayou 4400 and Lower Saline Bayou at minus 4857 feet. Elevation is 161 feet.

The Sealy and Cat Springs area of Austin County, is becoming more important each week with leasing activity. There were around 1500 acres leased in the area the past week with several of the major and independent oil operators taking part.

Conroe Outpost Well Testing

Houston.—If Humble Oil & Refining Company's South Texas Development Company A-73 proves a producer it will extend the Conroe field of Montgomery County 3000 feet west and will open up considerable acreage for production in the area.

At the end of the week it was waiting on cement to set at 5165 feet after running seven-inch casing to 5161 feet. On a drill stem test from 5150 to 5165 feet four joints of mud with a slight pressure were recovered. The test was made in two and one half minutes.

A sand was cored from 5161 to 5165 feet which had a slight showing of oil. Hockleyensis was topped at 4200 feet.

The well is located 6000 feet east of the most easterly west line and 466 feet south of the north line of T. Slade Survey.

Manvel Extended 600 Feet Southwest

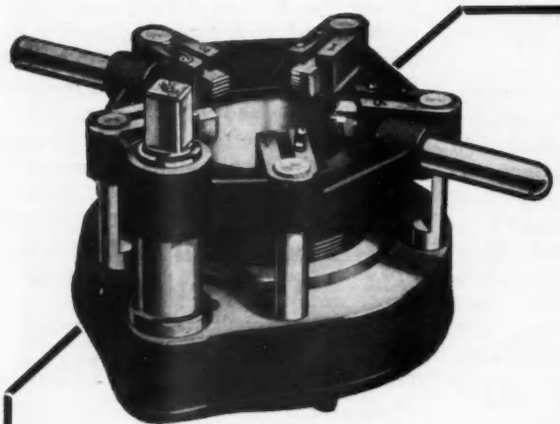
Houston.—The Manvel field of Brazoria County was extended to the southwest approximately 600 feet last week when The Texas Company's J. Groce 1 came in for 492 barrels of oil per day.

The bottom of the hole is 5150 feet and the flow was through a quarter inch choke. The oil showed no basic sediment but five percent water. Tubing pressure was 475 pounds and casing pressure 475 pounds.

Cleveland Field Test Swabbing In

Houston.—Black Gold Production Company's R. D. McDonald 1, 566 feet west of Gulf Production Company's Kirby C-6, Cleveland field, Liberty County, was swabbing in at the close of the week. The well was showing a small spray of oil at the end of the week. The operators lost the swab in the hole but was successful in fishing it out.

Bottom of the hole is 5839 feet and seven-inch casing was set at 5826 feet. On a drill stem test the well showed 110 feet of oil through a quarter inch choke in four minutes.



No. 2 threads 2½" to 4" Pipe. Uses bushings.

With or Without

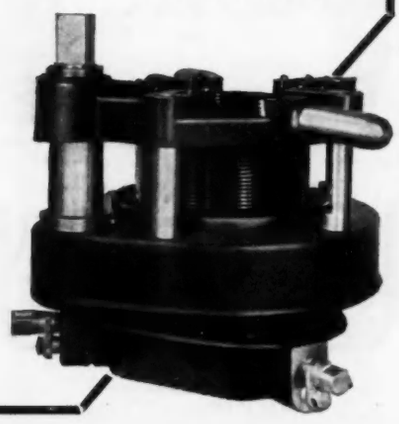
—bushings, and threads 2½" to 4" pipe perfectly.

No. 2 uses a separate bushing for each size pipe. The most popular tool in its capacity.

No. 2BR does not require bushings. New type pipe holder with three broad-faced chuck jaws and graduated guide bars operated by heavy set screws, clamps the tool securely to the pipe. Quick, easy, accurate centering. Balance of tool like No. 2. Uses No. 2 dies. Accurate, smooth, tapered standard threads always. An extremely popular tool in the oil fields.

Your dealer can supply you with either model.

No. 2BR threads 2½" to 4" Pipe. No Bushings.



THE TOLEDO PIPE THREADING MACHINE COMPANY

TOLEDO, OHIO *NEW YORK OFFICE, 72 LAFAYETTE STREET*

"TOLEDO"

PIPE TOOLS FOR RESULTS

Conroe Salt Water Intrusion Increases

Houston.—Salt water encroachment in the Conroe field of Montgomery County is becoming a troublesome factor. Some of the wells are being worked over and plugged back to the uppper sands in order to shut off the water, while others have been abandoned after flowing for some time.

During the first part of January, 1935, the field was producing an average of 860 barrels of basic sediment and water per day with an accumulative production of approximately 112,800 barrels of salt water for the area since discovery.

The Conroe sand is producing approximately 500 barrels per day while the upper Cockfield sand is producing around 300 barrels daily.

A survey of the fields shows that 51 wells are making salt water, dead or abandoned. There are 13 operators in the field that have wells making water.

The basic sediment and water ranges from four tenths of one percent to as high as 66.2 percent.

The Conroe field is practically drilled up and at present there are only four rigs running in the field.

It is reported American Liberty Oil Company is surveying a right of way for an eight-inch line from Conroe field to Rusk, where it will connect into Liberty Pipe Line Company's eight-inch line to the East Texas field.

D-E-S-I-G-N AND S-T-R-E-N-G-T-H

leave no room for fancy trigger-work in these tools the Industry has found so practical.

•

This cutting and pulling service, like the H&L pipe shooting service is getting the job done wherever used.

•

Sold to Foreign Fields.

Rental Service in U. S.

•

Literature telling the whole story mailed upon request.

•

Releasing Spear Patented—1805828

Inside Casing Cutter Patented—1788579

HALL & LOWREY INCORPORATED
PHONES: OFFICE 222—NIGHT 122—354
GOOSE CREEK, TEXAS, U.S.A.

Louisiana Representative
M. C. WOMACK (Phone 89) Thibodeaux, La.

Lovelady Area

Houston.—A. D. Adams and F. R. Mount's J. T. Sanders 1, one and a quarter miles east of Lovelady, J. J. Thomas Survey, was shut down at the close of the week preparatory to making a drill stem test from 1591 to 1635 feet where the operators had an odor of gas with no stain. The sand is in the Carrizo formation.

Thirteen Completions In Texas Gulf Coast

Houston.—There were 13 completions reported along the Texas Gulf Coast during the past week and of that total eight resulted in producing wells including several work overs. These two gas wells in the Tomball field of Harris County making 3,000,000 cubic feet of gas daily. Humble Oil & Refining Company's A. F. Gabbert 1, C. W. Hahl Survey, Tomball field, extended the field 1500 feet to the south when it came in for one of the gas wells.

There were three failures reported in the area.

Livingston Field

Houston.—Gem Oil Company's Davis Holmes 6, Livingston field, Polk County, was finaled during the past week for 360 barrels per day from the Cockfield formation. The bottom of the hole is 4361 feet. The well came in at the rate of 180 barrels the first 12 hours through a quarter-inch choke with a tubing pressure of 210 pounds; casing 510 pounds.

It is reported two independent operators have taken over the Wm. Munson 26 acres in the Livingston field for a cash consideration of $1000 and agreed to drill a test in the future and a second test after the completion of the first one.

New Sand Discovered In Danbury Field

Houston.—A new sand was uncovered in the Danbury field of Brazoria County when Shell Petroleum Corporation's Haury 3 came in January 31, 1935, for 1,000,000 cubic feet of gas daily and a small amount of oil from the Basil Frio.

The hole was drilled to 7495 feet and plugged back to 7237 feet, where seven-inch casing was set at 7186 feet and 2½-inch tubing hung at 7167 feet. The well was washed in and made the above initial flow through a 5/8-inch choke with a tubing pressure of 275 pounds; casing 475 pounds.

On a recent drill stem test from 7143 to 7158 feet the tool slipped to 7132 feet but the well showed 100 pounds pressure in 2½ minutes and 200 pounds pressure in 3½ minutes. The test was made in six minutes and the operators received one stand of mud and distillate.

The well is located 800 feet south of Haury 2 and in line with Blakley Winston 1 and 2 in the H. & T. B. Survey No. 13. It topped the Discorbis at 4970 feet, Heterostegina, 5638, and Marginulina at 5754 feet. Elevation is 29 feet.

Heretofore the producing sand was found around 1559 feet in the Miocene.

In the same field Shell Petroleum Corporation's Blakley Winston 7, H. & T. B. Survey No. 14, was drilling sandy shale in the Marginulina below 6072 feet after taking a drill stem test from 6040 to 6060 feet which showed a 450-pound pressure in five minutes and 500-pound pressure in six minutes. The test was made through a 3/8-inch choke on top and bottom.

Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CONROE—		
Alpha Pet. Corp., Texas Osage 3	400	5083
BARBERS HILL—		
Sinclair Oil Co., McKinney 5 (wo)	10	5194
HUMBLE—		
Humble, West Foster Prod. Co. 4 (wo)	45	2971
HANKAMER—		
Gulf Prod. Co., E. W. Boyt 17	120	2597
LIVINGSTON—		
Gem Oil Co., Davis Holmes 6	360	4361
MANVEL—		
The Texas Co., J. Groce 1	492	5150
J. B. Campbell, H. C. McCauley 1	*	....
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 77 (wo)	120	4202
SPLENDORA—		
R. R. Frankle, C. Neff 1	*	6037
TOMBALL		
Humble, A. F. Gabbert 1	¶1½	5566
E. F. Milo 1	¶1½	5550
H. Quilter B-6	600	5565
POLK COUNTY—		
Marathon Oil Co., A. S. Jones 1, 990 ft fr nw and sw lines of 246 ac tr in J. D. Thomas sur	*	3682

*Failures; †Junked; ¶Million cu. ft. gas.

Producer Completed In Kittrell Field

Houston.—Another producer was added to the Kittrell field of Houston County when Humble Oil & Refining Company's Shaw 5, 990 feet southeast and 330 feet from the southwest line of 100-acre tract in C. McEllis Survey, was finaled for 11 barrels per hour from 1990 feet through a half-inch choke.

Boone Brothers' Trinity State Bank 2, C. McEllis Survey, now is flowing at the rate of 26 barrels per hour after being shut down since the fire. The same operator's Trinity State Bank 1, C. McEllis Survey, discovery well for the area, has been put on the pump and is pumping about 70 barrels per day showing about 12 percent basic sediment.

In Angelina County, E. B. La Rue's W. D. Ivey 1, near Huntington, Scarborough Survey, is drilling in shale at 1403 feet at the end of the week. Koch & Duffey's L. W. Alberry 1, near Diboll, J. A. Prado Survey, was drilling at 1265 feet the end of the week after making a drill stem test from 1178 to 1200 feet which showed seven thribbles of fresh water with a slight show of gas in 15 minutes through a three quarter-inch choke.

Jasper County

Houston.—Republic Production Company and Houston Oil Company has made location for a deep test on its holdings in Jasper County. The well is located to the northeast of Buna and on the Sabine Tram Company's land, 330 feet out of the northwest corner of Section 71, in the H.&T.C. Survey. At the end of the week the operators were building roads to the location. To the southeast of Jasper a little lease play is now in progress with several of the independent oil operators active.

Harris County

Houston.—Walter Goldston et al's Weingarten 1, in the Ogburn area, Harris County, was drilling in shale at 6230 feet having encountered no Diboll-ensis down to 6070 feet. It is reported that the operators will carry the well on down to the contract depth of 6500 feet and abandon. It is also reported that one of the major oil companies is going to take the well over.

Louisiana Coast Activity Continues High

Lake Charles, La.—A survey of the Louisiana Gulf Coast during the past week shows the area with 540 producing wells with a production of 88,214 barrels of crude oil per day. The Vinton field of Calcasieu Parish has the largest number of producing wells and yields 3033 barrels per day. The Leesville field of La Fourche Parish has the largest daily output of oil with 52 producing wells making 18,984 barrels daily. The smallest field is the Sorrento field of Ascension Parish, which has three producers making only 20 barrels every 24 hours.

The Louisiana Gulf Coast is active with geophysical crews. No certain area is the hot spot for activity. Nearly every parish has from one to three geophysical crews. At the end of the week there were 38 crews in the South Louisiana Coastal belt.

Rework Lake Washington New Sand Discovery Well

Lake Charles, La.—Humble Oil & Refining Company's Cochrell Moran 23, discovery well for the new sand in the Lake Washington field, Plaquemines Parish, was worked over during the past week and is now flowing 500 barrels of fluid per day.

The well was deepened to 4355 feet, where a drill stem test was made from 4302 to 4355 feet and the well showed 30 tribbles of oil, mud and gas. The test was made through a three eighths-inch choke on top and bottom. The oil started flowing over the drill pipe at 26 thribbles. Two and half-inch tubing was hung at 4321 feet and the well came in flowing 95 percent basic sediment and water.

After reworking the well it now is making 500 barrels of fluid per day, 31 percent basic sediment and water and 69 percent oil through a three eighths-inch choke with a tubing pressure of 525 pounds; casing 460 pounds.

Gillis Extension Test Coring Deeper

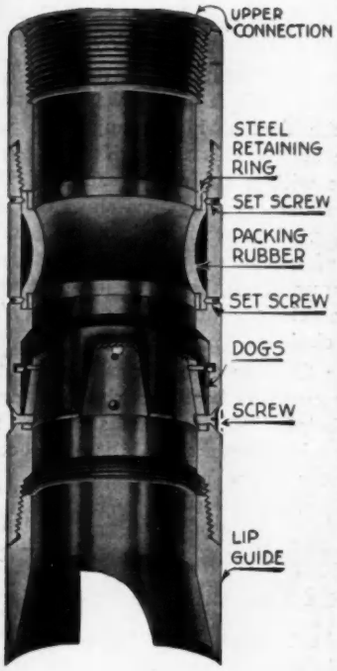
Lake Charles, La.—In the Gillis field of Calcasieu Parish, Fohs Oil Company's O. H. Castle 1, one mile south of the discovery well for the area, Section 13-9s-8w, cored below 7051 feet at the close of the week and received 12 feet of sand that showed oil. The operators are preparing to test the sand.

Previously, the operators had cored from 7042 to 7051 feet and received eight feet of sandy shale that showed oil. An electrical logging device was run and did not prove satisfactory for a test so the well was carried on down 7063 feet.

Union Sulphur Company's Powell Lumber Company 1, 750 feet north and west of State 1, Section 12-9s-8w, was drilling brittle shale at 6282 feet

WHY STAY UP ALL NIGHT DRIVING TO GET A FISHING TOOL

... worrying over whether you will get back before the fish is stuck, when a very small investment will place the right tool for the job on your derrick floor... a tool that will make a very simple job out of what would be an expensive, hazardous, difficult, and long-drawn out one.



Let's prepare for these emergencies which happen under the best of operating conditions. No need to lose a night's sleep if a...

GRAY OVERSHOT

Is ready to pick up the fish before it gets stuck.

A Simple ... Safe ... Efficient ... Fool-Proof Tool

POSITIVELY RELEASABLE

Day and Night Service.

GRAY TOOL COMPANY Houston, Texas.

and is slated for the next producer for the field.

Union Sulphur Company has made location for State 4 and 5 respectively. State 4, is located 2604 feet south and 2714 feet east of the northwest corner of Section 12-9s-8w. State 5, is located 1797 feet north and 669 feet east of the southwest corner of Section 12-9s-8w.

Bosco Extended to The East and South

Lake Charles, La.—The Bosco field of Acadia and St. Landry parishes was extended approximately 1500 feet east and little south during the past week when Superior Oil Producing Company finaled Comeaux A-1 for 351 barrels of 36.6 gravity oil per day.

The hole was carried to 8734 feet, where seven-inch casing was cemented. On the first 24-hour gauge the well made 351 barrels through a 9/64-inch choke with a tubing pressure of 1100 pounds and casing pressure of 1200 pounds. The well made 248,000 cubic feet of gas along with the oil. On a one-hour gauge the extension test made 64 barrels per hour through a 14/64-inch choke.

The Oswege Oil Company's Mouton 1, Bosco field, Acadia Parish, was drilling below 3810 feet in shale at the close of the week. This is the second operator to enter the field.

Completions in Louisiana Coast Include Nine Dry

Lake Charles, La.—Failures lead the list in completions over that of the producers along the Louisiana Gulf Coast during the past week. Of the total of 14 completions reported in the area, nine resulted in failures and the remaining five were oil producers with an initial production of 3066 barrels per day.

Louisiana February Allocations Made

Shreveport, La.—Allocation of February production in the various fields of Louisiana was announced last week by Dr. J. A. Shaw, director of the minerals division, Louisiana Conservation Commission. North Louisiana's allocation was placed at 21,000 barrels for the month with no breakdown for individual fields.

Allocations for Gulf Coastal fields for the month of February follow: Bayou, Choctaw, 450 barrels; Black Bayou, 950 barrels; Bosco, 14,250 barrels; Calliou Island, 6,850 barrels; Cameron Meadows, 1,350 barrels; East Hackberry, 5,350 barrels; Evangeline, 1,150 barrels; Four Isle, 750 barrels; Gillis, 1,050 barrels; Gueydan, 300 barrels; Iowa, 18,750 barrels; Lake Barre, 6,850 barrels; Lake Washington, 1,450 barrels; Leeville, 18,000 barrels; Lockport, 1,600 barrels; New Iberia, 300 barrels; Port Barre, 4,150 barrels; Roanoke, 1,800 barrels; Starks, 600 barrels; Sulphur Mines, 2,300 barrels; Sweet Lake, 1,050 barrels; Vinton, 2,750 barrels; and White Castle, 950 barrels. Total for south Louisiana, 93,000 barrels. Total for the entire state 114,000 barrels.

South Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior Oil Prod. Co., Commeaux A-1	351	8743
B. Iseringhauser 1	436	7843
CALLIOU ISLAND—		
The Texas Co., State Calliou 15	*	3911
EAST HACKBERRY—		
Sutton Oil Co., Muller 1	*	4716
GARDEN ISLAND—		
The Texas Co., Garden Island 14	*	2324
JENNINGS—		
Port City Oil Co., Syndicate 7 (wo)	69	1719
LAKE BARRE—		
The Texas Co., L. L. E. Lake Barre, Barre 12	*	4203
L. L. E. Lake Barre, 13	*	4015
State Lake Barre 29	1760	3829
LEESVILLE—		
Gulf Refining Co., Allen Land Co. 5	450	3580
SORRENTO DOME—		
Union Sulphur Co., United Lands 26	*	5922
SULPHUR—		
Union Sulphur Co., Fee 804	*	....
WEEKS ISLAND—		
Diamond Pet. Corp., Edmond Viater 1	*	3006
ST. LANDRY PARISH—		
Bailey, Gaunce, Lewis 1, sec 29-6s-5e	*	5043

*Failures; †Junked; ¶Million cu. ft. gas.

Erect Derrick at Old Abandoned Site

Shreveport, La.—Phillipi and associates last week erected derrick at the abandoned location of George Greer and associates' Louisiana Central Lumber Company B-1, located 2045 feet north and 1930 feet west SEc 2-9n-6e, Catahoula Parish, where an effort will be made to make a shallow gas well.

This test was abandoned in August, 1933, at 3016 feet making gas and salt water. The well created much interest due to the fact that it was believed to be in the "Conroe Trend". Two small gassers have been completed in the shallow Jackson formation in Concordia Parish, just south of Catahoula Parish.

Recovery Oil Company of Shreveport has taken over W. L. Sibey 1, NW NE SW 15-19-14, in the old Dixie field, Caddo Parish, which was abandoned as a dry hole at 883 feet by Kerley-Litton Oil Corporation in January, 1934, after a reported oil show at this level in Nacatosh. The new owners are rigging to deepen. The test is in the borders of production of the Tokio horizon of the Dixie field that was discovered in 1929.

Ten Drilling Permits Issued in Louisiana

Shreveport, La.—Ten drilling permits were issued last week by the minerals division, Louisiana Conservation Commission. Two were for North Louisiana, being divided between Bossier and Caddo Parishes.

In South Louisiana the remaining eight permits were divided among the following parishes: Calcasieu, two; Cameron, two; Iberia, two; and Plaquemines, two.

Two Small North Louisiana Wells Completed

Shreveport, La.—Two commercial wells, one small oil well and one small gasser, were among North Louisiana's five completions last week. One wildcat in Natchitoches Parish was among the abandonments, the other abandonments being in the shallow Blanchard gas field, Caddo Parish, and in the Zwolle field, Sabine Parish.

WANTED!

PETROLEUM ENGINEER

with thorough working knowledge of drilling fluids in both laboratory and field. In application please state Technical and Practical experience, length of field service and approximate salary expected. All communications held strictly confidential. Address,

BOX 215 — THE OIL WEEKLY, HOUSTON, TEXAS

Deep Test to Drill On Urania Trend

Shreveport, La.—Plans for a test in the "Urania Trend" in central Louisiana, just south of the Angelina-Caldwell Flexure, which will be equipped to go 8000 feet, were announced here last week by Sylvester J. Taylor of Tyler, Texas, who has taken part of the 12,000-acre block assembled several months ago in Rapides Parish by C. D. Loe, Trustee, Shreveport.

Taylor, who is president of Pansy Oil Company, but will drill the Rapides test individually, announced location for Bentley Lumber Company 1, located in irregular Section 40-5n-1w (also known as the Nicholas Deville Headright Survey), located 1796 feet north and 632 feet west of SWc 28-5n-1w. Five thousand feet of new drill pipe, wire line core barrel and a 36-foot kelly have been moved to the location and rigging has been completed. The location is half a mile south of Acme Oil Company's (Bentley et al) Barrett 1, SWc 20-5n-1w, which was junked at 4515 feet after a reported oil showing. Elevation of both locations is 85 feet.

The new location is southwest of the Urania field that produces from contact of Claiborne-Wilcox at 1520 feet, and the surface formation is Catahoula. The Barrett 1 logged base of Cane River and top of Wilcox at 3990 feet, and it is estimated that 6500 feet will place the bit at top of the Nacatosh.

Between this location and Urania is the abandoned shallow White Sulphur Springs field, La Salle Parish, that accounted for several 700- to 800-foot five- to 10-barrel pumpers in the Jackson. Base of the Jackson is expected around 2027 feet. The Cockfield lying immediately under the Jackson produces in the Gulf Coast area, so that if this test goes to 6500 feet it will have possibilities of production in Jackson, Cockfield, Claiborne-Wilcox and Nacatosh.

The geological work for Mr. Taylor was done by H. D. Easton, Shreveport geologist, who expressed the opinion that instead of finding the true Nacatosh at the 6500-foot level a fractured zone at that depth might be found corresponding to the formation found in marl at Zwolle instead of the true Nacatosh.

Eight other new locations were also announced last week in North Louisiana.

In the Rodessa gas field, north Caddo Parish, United Gas Public Service Company, which owns 14 of the 16 gassers producing from the Glen Rose at 5500-5850 feet in that field, announced two new locations last week. One half mile northwest of production, this company made location for A. W. Foscue 1, N½ SW 28-23n-16w, and an east offset to Arkansas-Louisiana Gas Company's Carter et al 1, to be known as Ellen Johnson 1, SWc NW NE 26-23n-16w.

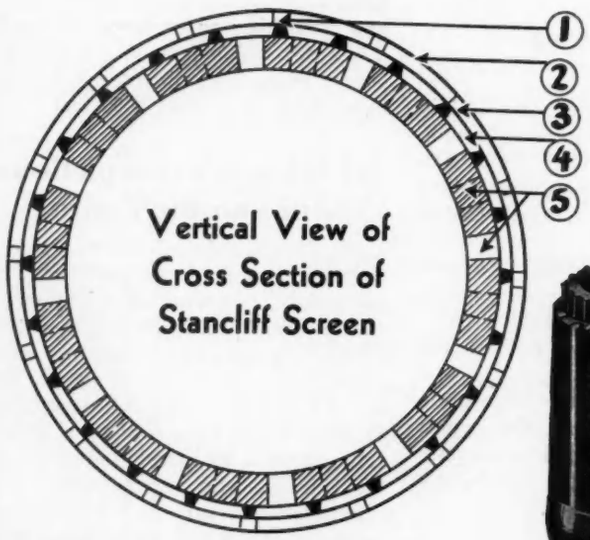
In the old Pine Island field, Caddo Parish, two new locations were announced as follows: G. R. Stevens, Hart 2, SE SW 22-21n-15w, an offset to the same operator's Hart 1, pumping 25 barrels daily in Nacatosh at the 1025-

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Blanchard)—		
Louanna O&G Co., Inc., W. M. Hammock B-1, ne se 5-18n-16w.....	*	957
NATCHITOCHES PARISH—		
Jack Lent, Brown Lbr. Co. 1, nw ne sw 27-9n-9w	*	3002
RED RIVER PARISH (Naborton)—		
Windsor Oil Co., Jenkins 3, se sw 11-12n-11w	20	2787
SABINE PARISH (Zwolle)—		
Creighton & Co., Inc., R. L. Williams 1, sw se 6-7n-11w.....	*	2762
UNION PARISH (Monroe)—		
Carbons Consolidated, Fee 7, ne sw 35-22n-3e . .....¶1½		2190

*Failures; †Junked; ¶Million cu. ft. gas.

Stancliff Patented Screen



Vertical View of Cross Section of Stancliff Screen

1. **Full depth, full width spacing lugs** rolled into the wrapping wire make the gauge and maintain it.

2. **Wire wrapping.** Galvanized Steel, Brass, Admiralty, Stainless Steel, and pure Nickel Wire, can be furnished.

3. **Ribs are laid on the outside of the pipe,** and are of the same metal as the wrapping wire. **Screens faster; all the surface is screening surface.**

4. **Flow channels** are formed by the ribs to increase screening efficiency and reduce fluid velocity. The clearance space provided makes STANCLIFF SCREEN easy to clean.

5. Perforations in the pipe are staggered with one row of holes under each flow channel.

Patented

Proven by 10 years preference by oil operators.

HOWARD SMITH COMPANY

1201 SAWYER ST. AT RAILROAD AVE.

HOUSTON, TEXAS

Phone Fairfax 6363 P. O. Box 688

foot level; The Texas Company, School Fee 3, SW NE 16-20n-15w.

In the shallow Blanchard gas field, Caddo Parish, M. Segal et al are rigging P. A. Sharpe 5, NE SW NW 11-18n-16w.

In the Little Creek offshoot of the Urania field, and in Grant Parish, C. & S. Oil Corporation is moving in materials for Swope 1, SW NW 17-9n-1e.

Two new locations were announced in Sabine Parish, one in Converse and one in Zwolle. In the former field, D. B. McConnell and associates of Shreveport made location for Whitney Corporation 1, NWc NE NW 3-9n-13w, a half mile north of production. In Zwolle, Crescent Drilling Company made location for Garner 3, NEc SW NW 3-7n-11w.

Turner and associates of Houston, Texas, have assembled a 5000-acre block centering in Section 21-10n-6w, Natchitoches Parish, for an early 3000-foot test. This block is on the southeast flank of the Sabine Uplift.

To Enlarge Rodessa Gasoline Plant

Shreveport, La.—United Gas Public Service Company is planning to double immediately the capacity of its 20,000-gallon daily gasoline absorption plant in the Rodessa gas field, north Caddo Parish, Louisiana. This company owns 14 of the 16 gassers in the Rodessa field that produce gas running approximately 2,000 gallons per million cubic feet from the Glen Rose at 5500-5850 feet.

United has eight gasoline absorption plants in North Louisiana, the largest of which are of 50,000-gallon capacity at Cotton Valley, Webster Parish, and at Alto, Richland Parish.

Will Drill Deep Test In Smackover Field

El Dorado, Ark.—Definite indications that south Arkansas will see some really deep drilling, deep for that state at least, during the coming year were given last week with authoritative reports that Gulf Refining Company plans an 8000-foot test in Township 16, Range 16, Union County, Arkansas, in the Smackover field. The test will be on Werner Sawmill Company land.

Lion Oil Refining Company and others three years ago drilled the deepest test ever sunk in Arkansas when they went to 7255 feet in Section 4-16-16. The hole was abandoned after the bit froze in pure salt at bottom of the hole. The formation was identified as Permian.

Besides the contemplated deep test by Gulf Refining Company, another major company is reported planning a geophysical survey of a part of the Smackover field for a deep test.

Reports have gained headway that there is a contemplated leasing campaign for deep production to extend over an area five to 15 miles wide extending from the Nevada County, Arkansas, field southeast to the Monroe, Louisiana, gas field. The western limit of the reported contemplated "play" will be a line of dry holes in which the anhydrite is found to have pinched out, and the eastern limit will be the Ouachita Mountain Uplift which geologists say was subjected to a vertical thrust in early Cretaceous time. Geophysical exploration will be necessary to determine this line which is not definitely determined at present.

This area is reported to contain excellent source beds which are believed to pinch out in a manner comparable to the Woodbine in East Texas against the Sabine Uplift, the Ouachita Uplift presenting an obstacle beyond which the early Cretaceous seas did not go and furnishing an eastern side against this uplift which formed a trap. These source beds, it is believed, will be found at a depth of around 6000 feet.

All Arkansas Completions Produce on the Pump

El Dorado, Ark.—Three wells, all pumping oil wells, were completed in as many fields last week in Arkansas.

The old Bradley field, La Fayette County, which was abandoned about three years ago after about six wells had been completed with a combined daily yield of approximately 100 barrels, added a 30-barrel daily well. W. H. Harvey, who several months ago purchased several of the abandoned wells and acreage surrounding them, completed the well. He has another drilling and location made for a third test.

Three New Locations Made in Arkansas

El Dorado, Ark.—Three new locations were announced last week in Arkansas. In La Fayette County, S. H. Riggs and associates have derrick up for J. M. Enyart 1, SE NW 35-15-24, a wildcat. In the Garland City field, Miller County, Ed Donahue and associates made location for Beck 2, 910 feet north and 1510 feet west SEc 33-15-26.

Southwest of Griffin and in the Union County part of the Smackover field, Gulf Refining Company made location for Werner Lumber Company 49, located 4620 feet north and 60 feet east SWc 5-16-16, which is planned as an 8,000-foot test.

Louisiana Refiners Seek to Avoid Tax

El Dorado, Ark.—Louisiana Oil Refining Corporation is reported negotiating with Houston Oil Company for a lease on the latter's 5000-barrel refinery at Camden, which has been shut down for some time. Reports are that Louisiana Oil Refining Corporation desires this refinery which is a skimming and cracking plant to process its Arkansas crude without taking it to its 15,000-barrel refinery at Bossier City, Louisiana, near Shreveport, to escape the five cents per barrel refinery tax recently imposed in that state.

Standard Oil Company of Louisiana has announced that it will discontinue buying Urbana, Arkansas, oil after February 20.

It also is reported that Lion Oil Refining Company is seeking to secure Standard of Louisiana's Smackover, Arkansas, connections but it is said Standard does not plan to part with these.

One New Test For Arkansas

El Dorado, Ark.—One drilling permit was issued last week by the Arkansas Board of Conservation. This test is R. Kamon's J. B. Barker 1, 220 feet south and west NEc SW SW 26-19-25, La Fayette County. This test is about three miles southwest of the old Bradley field in La Fayette County.

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LA FAYETTE COUNTY—		
W. H. Harvey, A. M. Allen 1, ne sw 18-19-24	30	2781
MILLER COUNTY (Garland City)—		
Thorntree Oil Corp., H. E. Beck 2, se sw sw 34-15-26	250	2923
UNION COUNTY (Urbana)—		
McCreslenn Oil Co., E. King 1, sw ne ne 3-18-13	65	3560

*Failures; †Junked; ¶Million cu. ft. gas.

10,000-Acre Grenada County Block Assembled

Memphis, Tenn.—P. R. Kohlheim and others of Memphis, Tennessee, have just completed blocking approximately 10,000 acres of leases in the eastern part of Grenada County, Mississippi, adjoining a large block held by Thompson-Westbrook Holding Company, beginning at Bogue Creek and running northeasterly and southwesterly in the trend of the structure.

Early drilling arrangements will be perfected for a 3500-foot well to test the Ripley, Eutaw, Tuscaloosa and lower part of the Wilcox formations.

Start Test in Lake County, Florida

Miami, Fla.—William G. Blanchard, president of Oil Development Company of Florida, announced here today that definite arrangements had been made for the drilling of the first well under his 50-well Florida program.

This announcement comes at the end of six years of intensive study and exploratory work in the Florida Province by Mr. Blanchard and his various associates. It will be remembered that this group is well intrenched in the State of Florida, for Mr. Blanchard, in addition to having assembled lease blocks of over one million acres on two different occasions, also brought into the state seismograph and magnetic instruments for a comprehensive survey, which survey has already covered something over 20 million acres in the peninsula.

The exact location of the first well, which is to be known as the "South Lake Well," and which will be located in Lake County, Florida, will be released within a few days.

Contract for this South Lake well has been given by Oil Development Company of Florida to Sam E. Wilson, Jr., of El Dorado, Arkansas, and calls for spudding in on or before March 1, 1935. The contract calls for a depth of 6000 feet unless oil or gas in commercial quantities or crystalline or metamorphic material be encountered at a lesser depth. The terms of the contract also specify that the outfit is to be equipped with the late type core barrel and with a formation testing device so that the maximum of information can be obtained and preserved from the drilling of the hole. The outfit moving into Florida under this contract is being equipped with a brand new 122-foot steel derrick. It is also equipped with an illuminating plant for night operation.

Oil Development Company of Florida has a contract with Gulf Exploration Company (a Florida corporation) for the drilling of four additional wells.

El Dorado, Ark.—During one week in January, Atlas Pipe Line Company is reported to have transported 63,500 barrels of East Texas crude to two companies at El Dorado. A total of 27,975 barrels was moved for Lion Oil Refining Company, and 35,535 barrels for Root Refining Company.

Closure Reported Found Northeast of Denver

Denver, Colo.—Important geological information revealing evidence of closure on Derby Dome was disclosed in the completion of the water well for Riddle Petroleum Company's Baxter 1, SWc 2-3s-66w, north of here in Adams County. The well completed for 4000 barrels of water in the Laramie sand at 757-890 feet and did not encounter the Scranton coal beds, placing the test 400 feet structurally higher than the old Fitzsimmons well seven miles to the south, in which good shows of oil were encountered.

Charles T. Lupton, Rocky Mountain consulting geologist, who located the test, in his report said that the well would start 120 feet below the Scranton beds though other geologists held that the coal beds would be encountered. The water sands were encountered at almost the exact predicted depths, and correlation of the log of the water well with tests drilled in locations in several directions from Baxter 1 indicate a structural high at that spot.

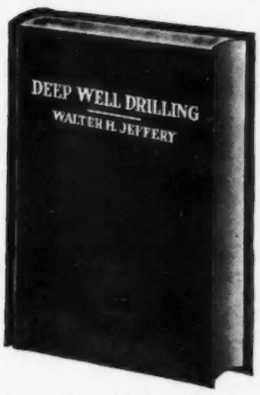
Riddle Petroleum Company has a 122-foot, re-enforced steel derrick on location and is moving in rotary equipment to drill a 9000-foot test. The company is selling

THIRD EDITION

of the Well Known Book

DEEP WELL DRILLING

by WALTER H. JEFFERY



Re-written, revised, and enlarged by the addition of the following New Chapters:

Geophysical Prospecting and Air Mapping.

Straight Hole Drilling and the Treatment of Crooked Holes.

Water Supply.

The Gas-Air Lift Method of Producing Oil.

A. P. I. Codes.

Preparatory to writing the new book, the author spent weeks in a first hand study of modern methods of drilling by the rotary system, and of completing wells, controlling high pressures and operating wells in the deep fields of California and Oklahoma.

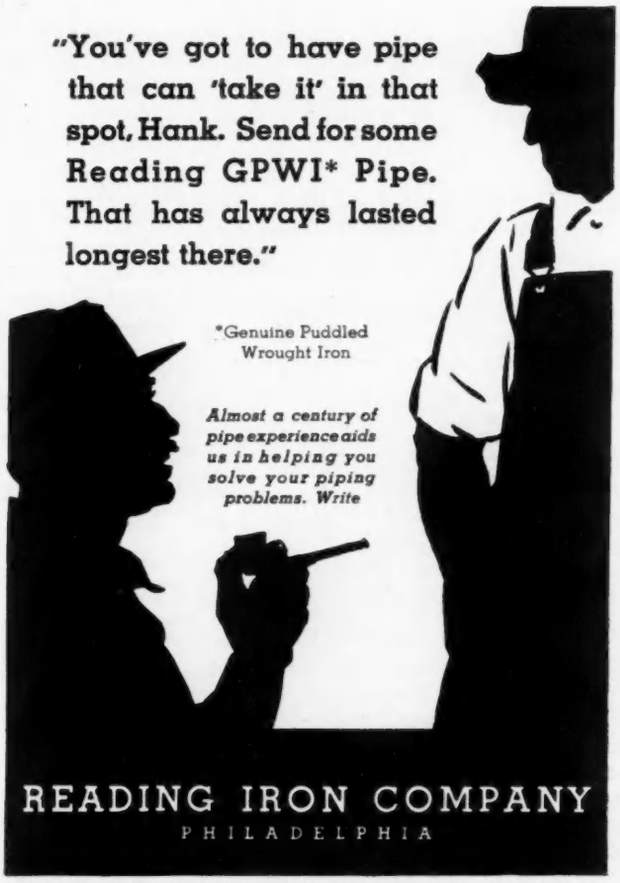
The third edition contains 816 pages, 150 pages more than the second edition, and 452 illustrations, but the price is the same, $6.00.

Send Check to

GULF PUBLISHING COMPANY

3301 BUFFALO DRIVE HOUSTON, TEXAS

"You've got to have pipe that can 'take it' in that spot, Hank. Send for some Reading GPWI* Pipe. That has always lasted longest there."



*Genuine Puddled Wrought Iron

Almost a century of pipe experience aids us in helping you solve your piping problems. Write

READING IRON COMPANY

PHILADELPHIA

SCIENCE AND INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON

spreads of acreage to major interests, and has $80,000 contracted. The wildcat is located five miles northeast of the city of Denver.

Shawnee Creek to Get a Deep Test

Casper, Wyo.—A contract assuring the drilling of a deep test on the Shawnee Creek structure, Converse County, Wyoming, was entered into this week here. Jebel Syndicate transferred substantial acreage embraced in the Edward O'Meara permit to Chadron-Osage Oil Company, which in turn will drill a shallow gas well in the N½ 17-32n-69w, for additional drilling fuel, and then will carry its State 1, SW SW SW 16-32n-69w, to at least 4000 feet. Should commercial production be encountered in State 1, several wells will be drilled on the O'Meara permit by Chadron-Osage. Representing Chadron-Osage Oil Company were E. B. Jones of Osage, Wyoming, and Edward Crites of Chadron, Nebraska, while John B. Barnes of Casper, Lawrence Johnson of Lusk, and B. J. Erwin of Cheyenne represented Jebel Syndicate.

Cheyenne, Wyo.—Saturday, February 25, has been set for the date of hearing the million dollar suit of George B. Brimmer and William Weeks against Union Oil Company of California in federal court here. The plaintiffs charge the company with alleged failure to develop production and market for oil from the Maverick Springs field, Hot Springs County. Sheridan-Wyoming Oil Company has brought a similar suit against The Texas Company

Cody Area

Cody, Wyo. — Rocky Mountain Gas Company is rigging up rotary for Oregon Basin Oil & Gas 1, SW NW 35-51n-100w, in the Oregon Basin field, 15 miles southeast of here in Park County. Company is drilling the well to the gas horizon in the Frontier series to augment its supply for Cody consumption.

Ohio Oil Company's Wm. Hoskins 1, SW SW SW 14-56n-97w, Byron field, Big Horn County, is drilling the Red Beds at 4685 feet and should be an early completion.

Enlarge Capacity Of Wyoming Refinery

Thermopolis, Wyo.—Fern Oil Company, an affiliation of Midland Oil & Refining Company of Denver, is increasing the capacity of its recently constructed refinery here from 2500 barrels daily throughput to 7500 barrels daily. Company is installing additional refining units and three new 100-horsepower boilers. The refinery specializes in the manufacture of road and fuel oils from black oil.

Unusual Interest Attached To Lea County Wildcat

Hobbs, New Mexico.—Unusual interest is centered upon the daily progress made by Amerada Petroleum Corporation's State 1-D, Lea County wildcat, in expectation that a new oil field will be uncovered either from the Eunice or Hobbs fields' lime horizons. State 1-D is situated about seven miles north of the former field, and at C NW NW 1-20s-36e. Drill stem test made in lime at 3750-3803 feet, or 203 feet below sea level, failed to yield oil, gas or water. Considering its comparatively high structural position it is believed to be close to the Eunice oil horizon, which ranges close to a sub sea depth of 300 feet. General territory to the north and south of this wildcat will be the scene of an active lease and royalty play should it make an oil producer. A nominal gas yield was revealed in using formation tester at the 3100- and 3700-foot levels.

Anderson-Prichard Oil Corporation, Oklahoma City, is starting two wildcats in Lea County. Location has been made for Fisher 1, C SE NE 8-20s-35e, situated about four miles northeast of nearest production in the Lea-Lynch district. The company holds an undivided 3/8 interest with Repollo Oil Company (Sinclair Prairie Oil Company) in a wildcat block, centering about five miles south of the Hobbs field. Location has been made for B. W. Arnold 1, SWc NW SE 11-20s-38e, with the Oklahoma concern in charge of operations.

Three new locations were ordered drilled last week in the North Jal field, including two by J. G. Hammond, Inc., Fort Worth, on a proved 80-acre lease farmed out by Continental Oil Company and The California Company. The latter partnership have awarded contract for the drilling of M. F. Sholes 1-A-24, C NE NE 24-25s-36e, a southeast outpost location. J. G. Hammond, Inc., is using its own rotary rigs in starting operations on M. F. Sholes 1, NWc E½ NW 13-25s-36e, and Sholes 2, located in the southeast corner of the same tract.

Two oil producers and a gasser were completed in the Cooper field during the past week. Humble Oil & Refining Company's S. R. Cooper 3, C SW SE 14-24s-36e, northeast outpost location, failed to make an oil producer in drilling to sulphur water at 4194 feet, or 843 feet below sea level. The hole was plugged back to 3494 feet, resulting in an estimated gas production of 25,000,000 cubic feet daily through 2½-inch tubing landed at 3480 feet. The well registered 1150 pounds closed-in tubing pressure. The Texas Company's I. B. Ogg 2, C NW NE 35-24s-36e, has been completed at 3472 feet, or 185 feet below sea level, rated at 1100 barrels of oil and 9,000,000 cubic feet of gas daily after treating with 2,000 gallons of acid solution. The company's Ogg 3, C SW NW 35-24s-36e, is preparing to complete at 3458 feet, or 172 feet below sea level.

Stanolind Oil & Gas Company's A. E. Meyer 5-A, C NW NE 22-24s-36e, situated on the north rim of the Cooper field's oil area, gauged 108 barrels of pipe line oil per hour from saturated lime at 3565-3575 feet, or 229 feet below sea level, flowing through 1½-inch choke on tubing, with 150 pounds back pressure on tubing. The gas yield was 1,388,000 cubic feet daily. Meyer 4-A, C NE SW 22-24s-36e, most westerly location, definitely established its water source as being from the bottom of the hole, and the well has been plugged back from 3606 feet, or 253 feet below sea level, to 3575 feet. It is low on structure, having topped the brown lime marker at 3178 feet, or 175 feet above sea level. Gypsy Oil Company's Cooper 1, C SW NE 23-24s-36e, which has been in process of completion for about three months, with the hole bottomed in sulphur water at 3580 feet, or 229 feet below sea level, is shut in pending the erection of a treating plant.

Shell Petroleum Corporation's State-Endura 1, C SE NE 12-21s-35e, located 1½ miles west of the north end of

Mountain States Completions

NEW MEXICO

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Cooper Field)—		
Humble, S. R. Cooper 3, c sw se 14-24-36e	¶25	4194
Phillips Pet. Co.-Pure Oil Co., Woolworth 12, c ne sw 26-24s-36e	†	950
Stanolind, A. E. Meyer 5-A, c nw ne 22-24s-36e	¶3-5000	3575
Texas Co., I. B. Ogg 2-A, c nw ne 35-24s-36e	¶9-1100	3472
LEA COUNTY (Eunice Field)—		
Atlantic, State 1-F, c sw sw 29-21s-36e	*	3976
LEA COUNTY(Hobbs Field)—		
Amerada-Skelly, State 1-D, nec sw nw 24-18s-37e	¶4¼-7290	4240
Anton Chico Dev. Co., Anton Chico Grant 1, ne sw 20-9n-17e	*	2610

*Failures; †Junked; ¶Million cu. ft. gas.

the Eunice field, tested sulphur water at 3980-4000 feet, or 412 feet below sea level. It was then deepened to 4095 feet, and three-inch tubing with packer set at 4037 feet, for a swabbing test. This semi-wildcat is not expected to make an oil producer, but has ample dry gas production cased off to assure a commercial gas well. Atlantic Oil Producing Company's State 1-F, C SW SW 29-21s-36e, has been temporarily abandoned after repeated attempts to avoid being the first dry hole for the Eunice field. It was drilled to 3976 feet, or 368 feet below sea level, and produced only a small percentage of oil with sulphur water when plugged back for a shot with nitro and a second injection of acid. Continental Oil Company and The California Company's M. Lockhart 1-A-30, C SE NE 30-21s-36e, swabbed and flowed oil from lime at 3940 feet, or a sub sea depth of 301 feet, and is now awaiting results of treatment with 1,000 gallons of acid.

Treatment of Amerada Petroleum Corporation and Skelly Oil Company's State 1-E, northwest outpost producer for the Hobbs field, with 2,000 gallons of acid in porous lime at 4162-4240 feet boosted the natural flow from 1865 barrels oil and 1,350,000 cubic feet of gas daily to 7292 barrels of net oil and 4,260,000 cubic feet of gas daily. The well was drilled to a sub sea depth of 560 feet, and opens the way for further exploration work along the northwest trend.

Two producers on the east flank of the Hobbs field were in process of completion last week. Shell Petroleum Corporation's Sanger Investment Co. 2, SWc SE SW 27-18s-38e, a doubtful location, swabbed 200 barrels daily at 4228 feet, or 585 feet below sea level. It will be treated with acid. Continental Oil Company's W. D. Grimes 2, near SEc 28-18s-38e, flowed oil by heads when swabbed through 2½-inch tubing at a total depth of 4220 feet, or 578 feet below sea level, then shut down to treat with 2,000 gallons of acid.

New Mexico Gasoline Tax Collections at Peak

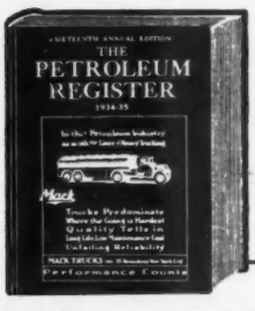
Santa Fe, N. M.—Revenue from state gasoline tax collections in New Mexico reached a new high during the year 1934, according to records compiled by Mrs. Adolph P. Hill, gas tax collector. During the past year collections totaled $2,799,295, which is $36,212 greater than the previous high year, 1933, with a revenue of $2,743,083 from gasoline taxes.

Lance Creek Activity Expected to Increase

Lusk, Wyo.—Considerable activity is predicted for the Lance Creek district in Niobrara County, Eastern Wyoming, this next year, as a result of the contract entered into between Ohio Oil Company and Sinclair-Wyoming Refining Company. Ohio Oil Company is delivering 1000 barrels daily of Lance Creek crude to the Sinclair refinery at Parco. This has created a scramble for crude among small independent refineries in Eastern Wyoming, Western South Dakota, and Southern Montana. All production from the Osage field is being taken immediately.

This week Ohio Oil Company spudded Rohlf 1, NE NE SE 32-36n-65w, in the Lance Creek field, and has set the 12½-inch surface casing at 215 feet. The well will be completed in the Sundance sand, where only two wells have been drilled to date. It is expected that Argo Oil and Continental Oil companies, which own continuous acreage, will drill one or several Sundance wells each.

Jebel Syndicate of Lusk, which has heavy acreage in the east end of Lance Creek, is completing negotiations with eastern interests to drill a well offsettting the old Western States Oil Company and Argo Oil Company's well in SW NE 28-



Just Off the Press!

THE 16TH ANNUAL EDITION OF THE **PETROLEUM REGISTER**...724 Pages with information on—23,000 oil companies.

The Only Book of Its Kind

NEW features of the Register include the Petroleum Code which is a 31 page section. It is published in accordance with its latest form and there are footnotes at the bottom of each page which give all the repealed sections in their chronological order, an Organization Chart showing the Personnel of the Planning and Coordination Committee, the chairman and members of the various subcommittees, the Regional Chairman, etc. and their affiliations; a list of 600 Refineries arranged by states, showing location, type, capacity and the Names of the Superintendents, the names of 1,500 Tank Vessels showing owner, registered tonnage, speed, etc.; a list of Exporters and Marine Transportation and Lighterage Companies.

The customary departments have been considerably enlarged. The Buyers' Guide consists of 132 pages listing the name and products of more than 1,600 Equipment Manufacturers. There are 45 pages listing 600 Refining Companies; the names of 7,000 Crude Oil Producers, 12,000 Marketers and Jobbers of petroleum products arranged by states; 400 Compounders and Grease Manufacturers; 400 Natural Gasoline Manufacturers, 100 Pipe Line Companies and 2,000 Foreign Oil Companies arranged by Countries; Detailed information is given, such as, officers, capitalization, subsidiaries, properties, purchasing agents, chief engineers, etc.

Also included is a list of 3,000 Trade and Brand names and a Petroleum Personnel Section containing the names of 4,000 Oil Company Executives; a complete list of Natural Gasoline Plants arranged by states, giving location, type, capacity, a comprehensive Statistical Section of 55 pages containing a wide variety of data on production, consumption, imports, exports, gasoline taxes and prices, etc.

SEND ORDERS TO

$10 **GULF PUBLISHING COMPANY** $10
3301 Buffalo Drive Houston, Texas

BW PRODUCTS for pumping wells
The KEY to LOWER LIFTING COSTS
CORRECTLY DESIGNED .. ECONOMICALLY PRODUCED
REASONABLY PRICED

the MONARCH . . .
a CHAMP who looks for TROUBLE

Use a MONARCH Ball and Seat on that tough well—it is harder than other non-corrosive balls and seats—and it will stand up surprisingly under the cutting action of sand — and there will be no ball breakage, either.

BRADFORD MOTOR WORKS INC.
OIL WELL SUPPLIES
BRADFORD, PA. TULSA, OKLA.
EXPORT OFFICE—30 CHURCH ST.—NEW YORK CITY

36n-64w, which has produced more than 100,000 barrels since its completion at 4004 feet in 1921. The well now is producing 30 barrels daily, which is selling at 43 cents above the Lance Creek posted price of 75 cents a barrel to independent refiners.

Iles Dome

Craig, Colo.—Stanolind Oil & Gas Company is spudding Parkinson 35, southeast corner of NE 27-4n-92w, in the Iles Dome pool, northwestern Colorado. Company is developing production in that field for delivery to Utah Oil & Refining Company's plant at Salt Lake City.

New Sand Renews Interest in Montebello

Los Angeles. — The finding of fairly rich oil sands from 5020 feet to 5136 feet, bottom of hole, in Universal Consolidated Oil Company's No. N-2 at Montebello has centered renewed interest in this old field where numerous efforts have been made to uncover a paying zone below those formerly producing.

This hole cored good oil sands below 5020 feet and a formation tester caused 20 stands of pipe to fill up with 35 gravity oil and indicated the presence of considerable gas.

The hole has been bridged at 5020 feet and string of casing is to be cemented for a production test. New interest is being shown in leasing and if the well proves commercially productive, a number of new wells will be drilled, and several old producers drilled deeper.

Some say the new zone is below the third producing level for the field, and they also say the formation is not Miocene.

Fullerton Oil Company's McGinley F-29 now is drilling at 8020 feet in hard sand and shale, seeking a real deep oil sand. String of nine-inch casing was cemented at 7164 feet. Standard Oil Company of California's Baldwin 75, which drilled to 8311 feet, has been plugged back to 3450 feet for 120 barrels of 25.7 gravity oil with an equal amount of water.

Three Mountain View Wells Initial 5,670 Barrels

Los Angeles.—Mountain View finished three new wells last week with a total flush production of 5670 barrels of clean oil and two more wells are now in the oil sand fast nearing the completion stage.

Although 13 wells are actively drilling in the field, the limits have been fairly well defined and it is probable that future activity will gradually ease off. The field is spotty and certain areas have already been proved to be of little value.

California 1934 Output Up but Stocks Decline; Outlook Bright

Los Angeles.—The daily average production of crude oil in California in 1934 was 480,845 barrels, an increase of 6644 barrels a day over 1933, but during last year all stocks were reduced 25,540,950 barrels, largely heavy crude, including fuel oil and gasoline, while stocks of light crude were up 1,670,771 barrels. These figures are from the official American Petroleum Institute report for 1934, compiled by the Los Angeles branch office.

From the standpoint of wells completed, 1934 was the best year since 1930, as well as for total initial production. The record of completions and total initial production for California follows by years:

COMPLETIONS

Year	Total	Prod.	Dry	Initial Production
1928	903	712	191	681,629
1929	1,224	910	314	1,307,496
1930	1,009	755	254	584,521
1931	484	246	238	364,434
1932	375	184	191	156,623
1933	411	248	163	274,104
1934	699	452	247	570,637

It will be noted that 1929 was a big year, both from the standpoint of number of wells completed as well as total initial production. The year 1929 started out with 654 wells drilling, but dropped to 558 at end of the year. The year 1930 was fairly good as to completions and flush production, but the number of wells drilling had dropped to 370 at end of period. The low ebb for completions came in 1932 when only 375 wells were completed and the total initial production was only 156,823 barrels. At end of 1932, only 82 wells were actively drilling.

New Wells

Well completions jumped to 411 in 1933 with total flush production of 274,104 barrels. Again in 1934, wells completed increased to 699 and flush production was up to 570,637 barrels. Total number of active drilling wells at close of 1934 was 214.

It now is estimated that between 800 and 900 wells will be drilled to completion in California in 1935, and should one or more new fields be discovered, the number might increase to close to 1000.

Wildcatting in California dropped to a low ebb in December, 1932, when only 20 wells of this character were active against 126 at the close of 1928. The peak was reached in December of 1929 when 174 were drilling. The come-back is very slow, but the 28 actively drilling in December last year were in strong hands and practically all them are actually trying to find either oil or gas. The promotion wildcat is practically out of the picture at this time.

Following is the record for number of wildcat wells actively drilling in California at the end of December in California by years:

Year	No. Wildcats Drilling
1926	140
1927	103
1928	126
1929	176
1930	55
1931	59
1932	20
1933	26
1934	28

The stocks of all petroleum products in California present a picture that is most encouraging, due to a steady decline year by year since 1929, when the peak for all time was reached. Since the close of 1929, all stocks of the state have declined 57,783,799 barrels.

Light refinable crude oilstocks were off 3,919,524 barrels during the same period. Gasoline stocks were down more than 6,000,000 barrels.

Following is the record since the close of 1926:

CALIFORNIA STOCKS—END OF YEAR— IN BARRELS

Year	Heavy Crude and Fuel Oil	Light Crude	Gasoline	All Stocks
1926	88,707,499	30,835,057	11,673,563	145,612,176
1927	93,013,061	20,268,569	12,725,841	137,395,067
1928	101,306,108	17,954,434	10,766,410	141,057,009
1929	113,421,316	41,469,458	16,432,842	184,002,116
1930	109,419,521	42,744,491	17,241,334	181,033,141
1931	99,301,196	41,895,200	15,820,753	169,835,949
1932	101,174,293	39,299,041	15,670,771	168,246,425
1933	93,887,454	35,920,074	13,808,061	155,464,569
1934	67,182,258	37,549,934	10,343,477	126,218,317

Del Rey Extension Offset Well Disappointing

Los Angeles.—Five wells now are drilling in the Del Rey hills extension of the old Venice field and five others are expected to start within two weeks. Union Oil Company's Vidor 6 was completed last week for 900 barrels of oil at 6113 feet. The gas pressure was not up to expectations. The new well is an offset to the Fourl discovery hole, which is up on the hill above Vidor 6.

Big Ben Oil Company's test, second well to start drilling in the new area, is bottomed at 6079 feet and 6⅝-inch casing is being centered at 6070 feet.

Chas. Fourl is drilling his No. 2 test at 3520 feet and is building rig for No. 3. Madison Oil Company has rig up for its first hole. Trans-Western Petroleum Company is grading location for its No. 1. Mommouth Oil Company is drilling at 3000 feet in its No. 1 after cementing 11¾-inch pipe at 700 feet.

This new area is within the city limits of Los Angeles and regulations are strict. No drilling will be permitted within 2500 feet of the beach and no well can be nearer than 250 feet of a public highway. Tracts must be one acre in area to get a well, but owners of lots too small for a well, will be awarded royalty from the offset well.

California Completions Initial 35,915 Barrels

Los Angeles.—New and recompleted oil wells in California the past week came close to establishing a record for flush production and since these wells usually produce five days to establish a potential, they will have a real effect on the state's production average.

Sixteen new completions had a combined flush or initial production of 26,480 barrels and four recompletions brought the total for the week to 35,915 barrels, slightly better than 1795 barrels per well.

Union Oil Company's King 8 at Kettleman Hills was good for 12,235 barrels of 33.8 gravity clean oil in addition to 25,000,000 cubic feet of gas, with bottom of hole at 8525 feet. Standard Oil Company of California's No. 21-19J in this field was good for 2910 barrels of oil and 160 barrels of water and it is shut in. Same company recompleted two at Kettleman Hills for 7600 barrels.

Long Beach completed five new producers for an average of 600 barrels per well. Mountain View had three wells good for 5670 barrels of new oil.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LONG BEACH—		
Bremmar Pet. Corp., Roberts 1	110	4050
Hil-Mar Dr. Co., No. 2	310	5070
Geneva-Maria Oil Co., No. 1	650	4200
Olmstead Oil Co., McKenzie 2	730	4225
Rotary Drillers, Hueshaw 1	1200	4420
WEST COYOTE—		
Standard Oil Co., M-C 118	885	6235
VENICE—		
Union Oil Co., Vidor 6	900	6152
MANHATTAN BEACH—		
Staple Oil Co., No. 1, 24-3-15	*	7315
BUENA VISTA HILLS—		
Honolulu Oil Corp., No. 4	250	3094
EDISON—		
General Pet. Corp., Jed 1	125	2989
MOUNTAIN VIEW—		
A. T. Jergins Trust, Wright-Bloomer 2	2000	5716
National Oil Co., Cowan 1	1300	5714
Sovereign Oil Co., No. 3	2370	6221
KETTLEMAN HILLS—		
Standard Oil Co., No. 21-19J	2900	8564
Union Oil Co., King 8	12,235	8525
MESA—		
Fairmesa Oil Co., Gray 2	350	2025
E. O. Arnold, Baker 1	165	2027

*Failures; †Junked; ¶Million cu. ft. gas.

Los Angeles County

Los Angeles.—The wildcat being drilled by International Oil Developers, Inc., near Saugus, in Los Angeles County, in Section 34-5-16, secured a lot of hot salt water while swabbing on a production test. The well showed a scum of oil and gas.

Hole was drilled to 4335 feet and 8⅝-inch casing was cemented at 1957 feet. The first test showed water entering hole and casing was re-cemented.

Michigan Production May Reach New Peak

Mt. Pleasant, Mich.—Increased pipe line demand for Michigan crude pushed total runs in the state for the week ending January 26 to 34,600 barrels, the highest weekly production reported over a period of nine months. The first week of May, 1934, runs for the week aggregated 35,000 barrels.

On the present basis of pipe line demand Michigan production may reach a million barrels for the month, which would set a state record. The highest month production was registered in May of 1934 with a total of 977,177 barrels.

Meanwhile, increased demand for oil and settling of producing in the Porter district combined with the failure to put on a comparatively small amount of new oil on production during the past six weeks, is tending to virtually lift proration in the state.

The State Proration Committee, meeting here last week, postponed final action on a new schedule for February for 10 days. At that time a prorate calling for a 75-barrel per well exemption and 50 percent of the excess probably will be recommended. Under the present schedule flush wells are limited to seven percent over a 50-barrel exemption.

Increased drilling and wildcatting is forecast for 1935 as a result of Michigan's present potential nearly equaling the market demand. A number of major drilling programs already are being mapped. Outside of wildcat activity, drilling probably will center in the Yost-Jasper area controlled by the Pure Oil Company. This pool, proven

BOTH HANDS FREE

Hang on Arm or, Set It Down . . .
and
KEEP BOTH HANDS FREE!
Shoot Light Where You Need It
because
ECOLITES TILT to any angle
APPROVED
UNDERWRITERS'
LABORATORIES
Standard Equipment Everywhere
SUPPLY STORES CARRY ECOLITES

No. 44 U.S.V. Ecolite
Economy Electric Lantern Co., Inc.
CHICAGO, ILL.

ANNOUNCING
PROBLEMS OF PETROLEUM GEOLOGY

Sidney Powers Memorial Volume. Edited by W. E. Wrather and F. H. Lahee — Originally announced as **Structure of Typical American Oil Fields**, Vol. III.

●

Papers on origin, evolution, migration, and accumulation of petroleum; porosity, permeability, compaction; oil-field waters; subsurface temperature gradients.

●

43 papers, 47 authors, approximately 1,000 pages, 200 illustrations. 6x9 inches. Cloth.
PRICE, $6.00
(To members the price will remain $5.00)

●

THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS
Box 1852 Tulsa, Oklahoma

up about two years ago, has been little developed to date due to other drilling obligations and a previous excess of production. The Yost-Jasper pool lies about midway between the old Greendale and Porter pools in Midland County. Dundee lime production is encountered at approximately 3400 feet with wells showing average initials of 200 to 500 barrels.

Exploratory drilling also is due in Gladwin County where completion of a 40-barrel deep lime well late in 1934 indicates a new Central Michigan structure and field.

Start Survey of Michigan Gas Fields

Mt. Pleasant, Mich.—Michigan Public Utilities Commission this week began its first check of potentials, withdrawals and pressure of gas wells in producing fields. This work, which will be continued from now on at regular intervals, is under the direction of E. J. Mahoney, Jr., natural gas engineer employed by the commission.

Under Michigan statute the Utilities Commission may regulate the production of natural gas in the state.

Recently following a long series of conferences with operators and the Oil and Gas Association, the commission approved new rules and regulations for the control of drilling and production of gas wells. In these rules wells are limited to 17½ percent withdrawal of their potential, however, on a sliding scale basis permitting greater withdrawals during the winter load period.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
McClanahan Oil Co., Breu 2, 13n-1w, ne nw se-20	75	3446
Pure Oil Co., Root C-3, 13n-1w, nw nw nw-20	700	3415
Root B-3, 13n-1w, nw sw se-7	50	3445

*Failures; †Junked; ¶Million cu. ft. gas.

Porter Gasoline Plant Operating

Mt. Pleasant, Mich.—Apex Gasoline Company's new casing head gas plant has been put on production in the Porter field of Midland County, processing between two and three million feet of gas daily. Production eventually will be stepped up to upwards of five million cubic feet.

The Apex plant is the first casing head plant to be constructed and operated in the Porter field.

Gasoline extracted is marketed with Roosevelt Refining Company of Mt. Pleasant and the residue dry gas piped and sold to Dow Chemical Company of Midland for fuel purposes.

Deeper Oil Sand Causes West Virginia Excitement

Charleston, W. V. — Six tests are drilling in the Coopers Creek section of Kanawha, where Fred Paul Grosscup and associates last summer struck oil at 4800 feet in the Oriskany sand. The well now has settled to a daily flowing production of 35 barrels. This new deep sand development encourages the redrilling of many oil fields in the state, and many predict that West Virginia's production will increase during 1935. All acreage in the vicinity of the Oriskany sand strike was leased immediately following the finding of commercial oil production.

Grosscup and associates started another well on the Copen farm, one half mile north of Grosscup 1. It is on Cassis branch of Coopers Creek and has reached 4600 feet. Clyde Oil Company is drilling 600 feet east of this test and are below 2050 feet. Benedum and Trees have started a well 3800 feet south of the Clyde test. Another well is being drilled on the Goshorn property on the south side of the Elk River, about a mile from the Benedum and Trees test. Velair Smith interests are drilling on the island in Elk River at the mouth of Coopers Creek and now are about 2800 feet in depth. The Godfrey Cabots are drilling on a branch of Campbells Creek, east of Charleston, and are below 4000 feet. Seigel Workman and associates have a rig on the ground for a well one half mile above the mouth of Coopers Creek.

There are rumors of additional tests to start drilling immediately in the area and a real compaign is expected to be underway by spring. If successful the tests in Kanawha County will cause a deeper drilling campaign throughout the state. By drilling deeper, geologists state it is possible to find production in the Clinton, White Medina, Gray Medina of Silurian age. In southern West Virginia production may be found in the Trenton Neville and Black River series of Ordovician age.

Eastern States Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
F. K. Fawcett & Co., J. L. & A. Phelan 1	15	3019
Union, G&O Corp., Hazlet 1	5	3011

WEST VIRGINIA

BOONE COUNTY—		
Pure Oil Co., Federal Coal Co. 71	¶	3172
CALHOUN COUNTY—		
Henderson Oil Co., Parson Hrs. 1	¶	2018
RITCHIE COUNTY—		
Lucky Strike Oil Co., Robinson 3	*	2125
W. R. Hays & Co., M. J. Livingston 2	¶	1921
A. E. Ryan, O. J. Stout 3	¶	1905
Mehaney & Lucas, Kelley 4	50	....
TYLER COUNTY—		
Gilco O&G Co., Way 3	*	1996

SOUTHEASTERN OHIO

NOBLE COUNTY—		
Tharman & Chancey Rich, Murphy 4	2	1346
MONROE COUNTY—		
Hendershot & Fleeman, Shafer 5	*	1395
MORGAN COUNTY—		
Choquille & Co., Matson 6	¶	1637
WASHINGTON COUNTY—		
H. B. Walker, Weymer 29	3	449
His Oil Co., Naught 1	*	1723
Harris & Co., M. J. Pool 2	*	3100
Robinson Bros., G. W. Johnson 6	*	730
Martin Bros., Morris 29	*	650
T. L. Ormiston, T. L. Ormiston 4	¶	1160
D. T. Orndoff, P. Roe, Jr. 4	15	1305
R. W. Turney & Co., Leasure 15	25	561
Harris Drilling Co., Pool 20	7	3108
McCoy & Lochary, Hile 1	2	538
F. Creighton & Co., Ludington 3	3	1540
J. C. Carner & Co., Jackson 3	¶	1555
SENECA COUNTY—		
Cessna-Feasel Oil Co., Chas. J. Hofer 2	¶	498
LOGAN COUNTY—		
Logan Coal Prod. Co., Crow 1	¶	1328
WYANDOT COUNTY—		
Upper Sandusky O&G Co., Weiker 9	10	1319

CENTRAL OHIO

ATHENS COUNTY—		
D. T. Orndorf, Morris 1	¶	1588
GUERNSEY COUNTY—		
George Jewell & Co., Cunningham 1	*	1515
MEDINA COUNTY—		
The Kemrow Co., Brack & Hellman 3	2	....
Edson & Son, Miller 40	6	477
Miller 41	*	....
Miller 42	*	....
Marcus Frank, Miller 41	*	....
STARK COUNTY—		
Ohio FG Co., Bower 1	¶	4265
Brendel Prod. Co., Hinton 1	¶	4502
SUMMITT COUNTY—		
McClay Bros., Celia Strodbeck 1	*	3706
East Ohio Gas Co., Everett Bexler 3	¶	4151
KNOX COUNTY—		
Ohio FG Co., DeLong 1	1	3101
TUSCARAWAS COUNTY—		
Status Dev. Co., Stone 4	¶	4777
PERRY COUNTY—		
Hopewell Oil & Gas Co., Emmert 5	*	....
MEIGS COUNTY—		
H. M. Nelson & Co., Musser 1	*	881
Meigs Co., Powell 1	¶	2020

KENTUCKY

HANCOCK COUNTY—		
J. B. Mayer, Mathhews 13	35	....
J. C. Ellis, Smith Hrs. 6	65	....
L. L. Fuqua 1	¶	....
W. E. Hupp & Co., Smith 4	35	....
OHIO COUNTY—		
Snowden-McSweeney Co., Peckenpaugh 17	5	....
Stewart & Sealey, Roberts 11	10	....
J. H. Haynes, Hinds 5	*	....
W E. Hupp & Co., Midkiff 1	*	....

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

COLORADO

ADAMS COUNTY—Riddle Pet. Co.'s Baxter 1-C, sw 2-3s-66w, Derby Dome, mim.

JEFFERSON COUNTY — Ruby Hill Oil Co.'s Braden 1, se se 24-4s-69w, near Denver, resumed dr with hole bottomed at 4200 ft. Test has been standing for more than a year with 6⅝-in cemented at 3950 ft.

LINCOLN COUNTY — Consolidated Smelting & Metals Corp.'s Hancock 1, nw nw se 7-17s-52w, dr 420 ft.

MONTEZUMA COUNTY—Coon & Teague's (McElmo Oil Co.) West 1, ne nw nw 31-36-17, McElmo District, dr below 3000 ft with objective expected around 4000 ft.

PARK COUNTY — South Park Oil Co.'s State 1, se se sw 16-11s-17w, Hartsel anticline, set 10-in 775 ft, dr Pierre shale 920 ft.

PROWERS COUNTY—Trojan O&G Co.'s Lotus 1, nw ne ne 15-23s-46w, Lamar district dr in Cherokee formation 4730 ft.

NEW MEXICO

BERNALILLO COUNTY — Norris Realty Co.'s Gallegas 1, cnw nw 19-11n-4e, completed rotary rig and expect to spud about Feb. 1.

CHAVES COUNTY—Commanche Drl Co.'s Sloop-Purcell 1, ne se 10-11s-36e, dr lime 1475 ft. Rosell Insurance Surety Co.'s Franks 1, ne se 30-11s-25e, Pomeroy anticline, sd 996 ft.

CURRY COUNTY—Geo. Schoonmaker et al's Hart 1, cse se 13-2n-31e, near Melrose, spd to 100 ft and sd to clear titles and may make new lcn.

EDDY COUNTY—A. & M. Pet. Co.'s State 1-A, csw ne 15-21s-27e, northeast of Carlsbad, dr in hard lime 1520 ft. Coronado Oil Co.'s Anderson 1, ne nw 13-20s-23e, lcn. Neal Willis et al's Montgomery 1, csl sw ne 10-23s-30e, dr anhydrite 3560 ft. Getty Oil Co.'s Dooley 7, sw nw 24-20s-29e sd 230 ft.

GUADALUPE COUNTY—Anton Chico Development Co.'s Anton Chico Grant 1, ne sw 20-9n-17e, abd hole at 2610 ft and skidded rig to new lcn.

LEA COUNTY—Amerada's State 1-D, c nw nw 1-20s-36e, elev 3590 ft, top anhydrite 960 ft, salt 1060-2255 ft, so 3495-98 ft, tested dry hole 3725-50 ft, dr 3760 ft. E. B. Guess et al's C. W. Justis 1, swc nw nw 20-25s-37e, sd 1060 ft. Argo Royalty Co.'s Byrl A. Burner-Texas Co. 1, near c ne ne 6-20s-32e, mim. R. H. Henderson et al's P. L. Langley 1, c se se 8-25s-37e, sp and sd; Russell-Steele 1, c ne nw 24-20s-33e, elev 3627 ft, sd 1075 ft. Anderson-Prichard Prod. Corp.-Repollo Oil Co.'s Fisher 1, c se ne 8-20s-35e, lcn. Humble's J. L. Coates 1, c nw ne 10-24s-36e, elev 3383 ft, top brown lime 2995 ft, junked gasser, td 3355 ft, sd for relief well to kill and abn; J. L. Coates 1-A, rig; F. M. Saunders 1, c ne ne 4-22s-34e, elev 3641 ft, cavey hole 490 ft. Maljamar O&G Corp.'s Baish 4, nec se ne 21-17s-32e, elev 4000 ft, tested 135 bbls oil and 1,000,000 ft. gas, td 4093 ft, sd after using 2000 gals acid. Nat'l Securities Oil Corp.'s V. Linam 1, nec s½ sw 33-18s-37e, elev 3712 ft, top anhydrite 1580 ft, logged salt 1716-2650 ft, top lime 2956 ft, dr by bit 4265 ft. Ryan Consolidated Pet. Corp.'s Acree 1, c ne nw 35-20s-32e, elev 3568 ft, dr 545 ft. Shell's State-Endura 1, c se ne 12-21s-35e, elev 3588 ft, top anhydrite 1453 ft, logged salt 1533-2865 ft, top lime 3020 ft, set 3-in tub 4037 ft, td 4095 ft, testing. Texas Co.'s Anna C. Moore 1, c nw se 21-20s-32e, elev 3508 ft, dr 1710 ft; D. D. Swearingin 1, c ne sw 8-20s-34e, elev 3627 ft, top anhydrite 1491 ft, salt at 1531-3265 ft, top brown lime 3280 ft, lowering cas 3828 ft. Texas Co.-Amerada & Columbian Carbon Co.'s Parker 1, c sw sw 29-26s-37e, lcn. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, rust.

ROOSEVELT COUNTY — Claudell Co.'s Wilmes 1, csw se 21-2s-30e, dr lime 3440 ft. Wilcox Oil Co.'s Gurley 1, sw se 32-7s-32e, lcn.

SAN MIGUEL COUNTY — Cabra Springs O&G Co.'s Thompson 1, sw ne ne 22-12n-22e, co 3803 ft after recovering lost csg.

UNION COUNTY—Sierra Grande Oil Corp's J. J. Rogers 1, cne sw 4-29n-29e, dr shale 420 ft.

VALENCIA COUNTY—Ringle Dev. Corp's Tome Grant 1, cse se 35-6n-3e, sd 500 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned.*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west.*
oih —*oil in hole.*
otd —*old total depth.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming.*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

WYOMING

CARBON COUNTY—Earl W. Reader Inc.'s Whitford 1, sw se se 24-20n-83w, dr 2600 ft; Union Pacific 1, csw sw 19-20n-83w, fsg 5931 ft. Ohio Oil Co.'s Sid Morris 1, cnw se 6-20n-77w, dr 5744 ft. Ohio Oil Co. and California Co.'s Kyle 1, ne se ne 26-21n-79w, dr 4039 ft. Argo Oil Co.'s Union Pacific 1, nec se se 5-24n-87w, run 7-in to 3173 ft for water shutoff and dr ahead.

FREMONT COUNTY — Mid-American Oil Co.'s Government 2, cne sw 14-28n-92w, dr 1800 ft.

NIOBRARA COUNTY — Inter-state O&R Co. and Fall River Royalty Co.'s Morrell 1, nw ne se 2-39n-61w, dr 3060 ft with 2800 ft water in hole.

WESTON COUNTY — Conway Oil Co.'s Government 1, se se nw, 7-41n-60w, dr 1286 ft.

SWEETWATER COUNTY—Vermillion Oil Co.'s State 1, sw sw sw 16-12n-99w, udr 7-in. cas to bottom at 4683 ft.

CALIFORNIA

KERN COUNTY

BUENA VISTA LAKE—Shell Oil Co.'s B. V. A. 1, 9-32-25, dr sand and shale 3947 ft.

CALIENTE—Signal Oil & Gas Co.'s Brown 1, 5-30-30, lcn. S. P. Land 1, 31-29-30, dr sand and shale 1960 ft.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, sd 4325 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, circulating 1550 ft.

DEVIL'S DEN—Richfield Oil Co.'s Alferitz 2, 14-25-18, dr shale 1160 ft.

NEAR EDISON—Cara Vel Pet. Corp.'s No. 1, 19-30-30, td 1910 ft, plug 1510 ft, perf 1500 ft, pumping water.

GOULD HILLS—The Texas Co.'s Jared How 1, 29-29-21, dr brown shale 3230 ft.

GREENFIELD—Sea Cliff Oil Co.'s Houghton 1, 7-31-28, sd 650 ft.

KERNELL—Standard Oil Co.'s Title Guarantee 1, 1-25-23, spud Jan. 16.

LOST HILLS—Standard Oil Co.'s United 1, 2-26-20, dr sand and shale 865 ft.

NEAR MOUNTAIN VIEW—Hogan Pet. Co.'s Symons 1, 4-31-29, td 4760 ft, fsg.

SEMITROPIC—Standard Oil Co.'s Hill 1, 8-27-23, dr sandy blue shale 2723 ft.

SO. BUTTONWILLOW—Seeple Oil Co.'s No. 1, 5-30-24, coring 2725 ft.

SOUTH DOME—Continental Oil Co.'s Gatchell 28-7, 7-25-30, spud Jan. 24.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, td 2192 ft, redr 1965 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-11-19, td 6229 ft, redr to 4320 ft, cored os from 3943 to 4157 ft. Reserve Oil & Gas Co.'s Tejon Ranch 1, 2-10-19, dr hard shale 1365 ft.

WEED PATCH—Associated Oil Co.'s Di Giorgio 1, 3-31-29, dr gray sand and shale 5488 ft.

KINGS COUNTY

ALPAUGH—Trico Oil & Gas Co.'s Magee & Stone 1, 36-24-22, sd 420 ft.

PYRAMID HILLS — General Pet. Corp.'s Martin 1, 20-24-18, rig.

TULARE COUNTY

TERRA BELLA—Baker-Grover Co.'s No. 1, 10-23-27, td 1604 ft, plug 1300 ft, wocs 10¾-in csg 1187 ft.

MISCELLANEOUS

FRESNO COUNTY—The Texas Co.'s Circle 1, 35-20-14, dr brown shale 1654 ft. Russ Oil Syn's No. 1, 28-12-11, td 5015 ft, in sandy shale to run formation tester.

HUMBOLDT COUNTY—The Texas Co.'s Eureka 1, 1-3-2, dr shale and stks sand 1833 ft.

MADERA COUNTY—Pure Oil Co.'s Chowchilla 1, 7-10-14, td 8244 ft, pulled liner, co, to core ahead.

SACRAMENTO COUNTY—Great American Pet. Co.'s Howard 1, 25-2-8, recovered fish, td 2980 ft, waiting fuel oil.

SAN JOAQUIN COUNTY—Amerada Pet. Corp.'s F.L.D. 1, 15-2-5, material on lcn.

TEHAMA COUNTY — Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, dr 2360 ft, showing gas.

SANTA BARBARA COUNTY

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, dr sand and shale 6270 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbough 1, 18-7-34, td 2975 ft, wocs 7-in csg 2570 ft.

NAPLES—W. E. Deuel et al's No. 1, 7-4-29, dr red shale, stks gray sand 5510 ft.

SUMMERLAND—Ortega Oil Co.'s Williams 1, 16-4-26, td 4583 ft, rep equip.

SAN LUIS OBISPO COUNTY

SEE CANYON—Farrell Pet. Co.'s No. 1, 18-31-12, sd 1420 ft.

CHOLAME—O. L. Willett's Jack 2, 10-25-15, sd 3540 ft.

VENTURA COUNTY

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, rur. Daniel Fisher's Elkins 1, 5-3-19, sd 762 ft.

HOPPER CANYON—Oil Ridge Oil Co.'s Moran 3, 1-4-19, sd 1475 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, td 7370 ft, run 1035 ft 8¼-in blank liner to 7000 ft, wocs.

OJAI—Continental Oil Co.'s Pirie 1, 12-4-23, td 1543 ft, set 8¼-in csg 1534 ft, flowed by heads 200 bbl rate, 19.4 gravity oil with cut 1 to 20 percent, sanded up.

RINCON—Woodrow Pet. Co.'s Woodrow 1, 4-3-24, co 7615 ft.

SANTA PAULA—E. M. Lesperance's Boosey 1, 31-4-20, td 570 ft, wocs 12½-in csg 450 ft. J. W. Mosher's No. 1, 22-4-21, sd 2290 ft, tested wet.

SANTA SUSANA—E. N. Dakes' No. 1, 6-2-17, sd 300 ft.

SESPE—Supreme Oil Co.'s No. 1, 1-4-20, material on lcn.

SHIELLS CANYON — The Texas Co.'s Shiells 128, 4-3-19, co 5433 ft.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, td 1855 ft, to set casing.

SOUTHERN CALIFORNIA

ATHENS AREA—F. A. Speik's Johnson 1, 2-3-14, dr sand and shale 4050 ft.

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, rigged up.

BREA CANYON — Pressel - Perry - Tull's Baird 1, 30-2-9, td 4145 ft, fsg.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, td 2698 ft, plug 2380 ft, sd.

CHATSWORTH—Marble Inv. Co.'s Deer Lake 1, 6-2-16, sd 2600 ft.

FAIRVIEW—Explorers Dr. Co.'s Norris 1, 9-6-10, sd 960 ft.

HAWTHORNE—Lennox Oilfields' No. 1, 4-3-14, foundations.

HERMOSA BEACH—Corniel Oil Corp.'s No. 1, 31-3-14, td 3900 ft, pumping 25 bbls, gr-14 oil, cut 10 percent, to do more work. Aron H. Hover's Bryant 1, 31-3-14, td 4200 ft, plug 3940 ft, bailing and co.

HUNTINGTON BEACH, on tidelands—Black Eagle Oil Co.'s No. 1-B, permit 194, 32-5-11, td 4702 ft, wocs.

LOS NIETOS—Rex Anglin Dev. Co.'s Fallis 1, 30-2-11, sd 1210 ft.

MANHATTAN BEACH—Bethlehem Explor. Co.'s Martin 1, 30-3-14, td 5304 ft, co. Staple Oil Co.'s No. 1, 24-3-15, abn 7315 ft.

PLACENTIA—Placentia Dev. Co.'s Verde 1, 35-3-9, td 4250 ft, redr to 3181 ft, sd.

PUENTE—N. O. Shively's Rowland 1, 23-2-10, dr shale and stks of shell 2958 ft.

SAUGUS—Barstow Oil Co.'s Walker 1, 35-5-16, sd 2300 ft. International Oil Developers' Powell 1, 34-5-16, td 4335 ft, wocs 8⅝-in csg 1957 ft.

SURF—B & B Oil Co.'s No. 1, 19-6-10, dr shale, thin stks os 4276 ft.

RIVERSIDE COUNTY—Corona Oil Co.'s Wardlow 1, 27-3-7, rur.

SAN DIEGO COUNTY—E. A. Hargrave's No. 1, 29-15-3, dr hard conglomerate 2300 ft. San Diego Gas & Pet. Corp.'s No. 1, 32-18-2, td 6333 ft, surveyed hole, to core ahead.

KANSAS

BARBER COUNTY—Southern Drilling Co. et al's Davis 1, sw se ne 13-34s-15w, sd 2960 ft.

BARTON COUNTY — Atlantic Oil Co.'s Vaniman 1, csw ne 15-20s-33w, td 4686 ft, pumped 572 bbls oil 24 hrs, to dd. Treleaven & Brimm et al's Haas 1, sw sw sw 30-18s-15w, set 6-in csg 3405 ft, so&g 3590-92 ft, td 3606 ft, flowing by heads. Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, lcn. D. I. Hall et al's Arnold 1, se sw 19-18s-15w, rig. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, rog. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, lcn.

BUTLER COUNTY—Gaines et al's McKinley 1-A, ne sw 19-29s-4e, td 1950 ft, reacidizing.

COWLEY COUNTY—Lassen's Ferguson 1, se nw 21-30s-8e, td 2176 ft, 1000 gals acid and no test.

DICKINSON COUNTY — Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd 2655 ft.

ELLSWORTH COUNTY—Carter Oil Co. et al's Teubner 1, se se nw 26-17s-9w, ru. Pryor & Lockhard et al's Gregory 1, se se se 19-16s-8w, lcn.

HARVEY COUNTY — Cameron Derby & Trees' Brainard 1, sw se nw 19-24s-2e, spd and sd. Imo Oil & Gas Co. et al's Sperling 1, se ne ne 23-22s-2w, swab 180 bbls oil 24 hrs.

KINGMAN COUNTY—Sam Jarvis et al's Morrissee 1, cse ne 23-30s-10w, rig.

McPHERSON COUNTY—Roth, Farrout et al's Bestwater 1, se sw se 23-20s-1w, set 6-in csg 3465 ft, hfw 3480 ft, sd 3485 ft. Lario Oil & Gas Co.'s Schrag 1, nw se sw 22-19s-4w, sd 3160 ft. Stafford et al's Krehbiel 1, nw se 27-21s-3w, (owdd) co 2080 ft. Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, rust 2983 ft.

NESS COUNTY—Texas Co. & Gypsy Oil Co.'s Goodman 1, csw sw 21-19s-23w, fsg 4355 ft.

PRATT COUNTY—Atlantic Oil Co.'s Prentice 1, cse nw 18-28s-14w, sd 3962 ft.

RENO COUNTY — Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w (owdd), sd 3337 ft. Lario Oil & Gas & Reserve Development Co.'s Shepherd 1, sw nw 18-22s-5w, set 5-in csg 4147 ft, hfw 4150 ft, D&A. Johnson & Carey et al's Dyck 1, se ne se 35-22s-5w, dr 3621 ft. Kessler-Thier & Skelly's Bigger 1, ne se sw 29-23s-6w, dr 1531 ft.

RICE COUNTY—Yingling et al's Maupin 1, nw sw sw 1-18s-8w, ru to dd. Allison & Fitzwilliams et al's Stumps 1, nw nw sw 4-18s-10w, ru. Foraker-Nickerson et al's Lyon 1, se se ne 27-20s-8w, td 1660 ft, running 10-in csg. Vickers Pet. et al's Gouldner 1, se ne nw 16-18s-9w, cellar.

ROOKS COUNTY—Stearns-Streeter et al's Hoskins 1, se sw se 34-9s-16w, td 3088 ft.

RUSH COUNTY—Flynn et al's Hartman 1, sw se nw 4-18s-16w, rig. Lario Oil & Gas Co. & Phillips Petroleum Co.'s Benbow 1, nw ne ne 12-17s-19w, fsg 3185 ft.

RUSSELL COUNTY—Lario Oil & Gas Co. et al's Moore 1, se se nw 34-13s-12w, set 15-in csg 528 ft, set 12-in csg 1098 ft, dr 1245 ft. J. Brouk & R. D. Bailey's Kluessner 1, nw nw se 34-15s-12w, rig. Hartman & Blair's Gurney 1, se nw 23-14s-14w, set 8-in csg 2405 ft, so 2405-20 ft so 2465-70 ft, dr 2775 ft. Wolf Creek et al's Donovan 1, sw sw se 10-15s-15w, sd 2350 ft. Hartman & Blair's Sullivan 1, ne ne se 2-14s-15w, dr 2010 ft. El Dorado Refining Co.'s Walz 1, se ne nw 29-13s-11w, set 10-in csg 2090 ft and sd. Hartman & Blair's Krause 1, ne nw nw 5-15s-15w, ru. Wolf Creek et al's Penn Mutual 1, sw sw sw 22-15s-15w, cellar. Hartman & Blair's Furthmeyer 1, ne ne ne 1-14s-14w, ru.

SALINE COUNTY—Dieter et al's Herrington 1, ne nw se 3-13s-1w, ur 8-in csg 2420 ft.

SEDGWICK COUNTY—Allison & Fitzwilliams' Struthers 1, ne sw sw 34-28s-2w, fsg 3295 ft. Syndicate Oil & Gas Co. et al's Ratzlaff 1, ne nw nw 30-26s-2e, pb 2985 ft. Aladdin Petroleum et al's D. Lauck 1, se ne nw 21-28s-2e, dr 1225 ft. Magnolia Pet. Co.'s Bartholomew 1, se sw 30-27-4w, set 9-in csg 3692 ft, rust.

SHAWNEE COUNTY—Jim Edwards' Detrick 1, cnw se 21-14s-15e, td 315 ft.

STAFFORD COUNTY—Atlantic Oil & Co. & Phillips Pet. Co.'s Guthrie 1, cnw nw 15-25s-11w, set 10-in csg 2605 ft, dr 2660 ft. Atlantic Oil Co.'s Hohner 1, nw se se ne 31-23s-14w, dr 3160 ft.

SUMNER COUNTY—Foraker et al's Hiett 1, se sw ne 34-34s-4w, sd 1285 ft. Tom Palmer's Wentworth 1, nw ne 9-35s-2e, sd 2550 ft.

TREGO COUNTY — Central Commercial Drilling Co.'s Wagg 1, nw nw se 17-13s-21w, td 1157 ft, cemented cave. A. D. Morton's Jones 1, se se se 20-12s-23w, cellar.

WABAUNSEE COUNTY—Reserve Development Co. et al's Moore 1, cnw nw sw 15-13s-12e, cellar.

OKLAHOMA

ATOKA COUNTY—Brookshire et al's Rowland 1, nw ne ne 18-3s-10e, pulled 5-in csg to test shallow sand. H. F. Nichols 1, sw sw nw 32-2s-9e, sd 420 ft.

BECKHAM COUNTY—Fred Coogan et al's Shelton 1, sw sw sw 33-10n-25w, td 318 ft, re-running surface pipe.

BRYAN COUNTY—C. B. Welch's M. Collins 1, sw nw 19-8s-8e, ru and sd.

CADDO COUNTY—H. W. Lee et al's Stacey Ferrel 1, sw ne ne 3-6n-13w, set 10-in csg 1402 ft, and sd. Denver P. & R. Co.'s Noe 1, nw sw sw 34-10n-10w, agitatinig with mud pump.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 3, sw ne sw 27-2s-3w, ru.

CLEVELAND COUNTY—Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, pits and mim.

COAL COUNTY—W. A. Delaney's Diamond 1, nw nw se 5-1s-8e, ssg 1848 ft, sd 1860 ft. J. D. Petty Oil Co.'s McMillan 1, sw nw ne 16-1s-8e, td 1110 ft, run 6-in csg.

COMANCHE COUNTY — F. F. Stevens' Green 1, se sw 2-1n-13w, sd 1215 ft. H. W. Baker's Miller 1, se sw se ne 22-2n-13w, spd and sd. Henry Rosenthal et al's Au-chi-re-ah 1 "B", nw nw nw 5-1n-9w, dr 240 ft.

GARVIN COUNTY — National Producing Co.'s Littrell 1, ne ne ne 31-2n-3w, sd 1087 ft. Anderson-Kerr Drilling Co.'s Riley 1, se se nw 2-4n-1w, sd 4152 ft. George L. Pace's Smith 1, sw sw ne 35-1n-1e, lcn.

GRADY COUNTY—Carter Oil Co. & Magnolia Petroleum Co.'s Harrison 1, cnw nw 28-3n-5w, dr 8880 ft.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, sd 598 ft. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, set 10-in csg 270 ft, sd 750 ft.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se sw 16-2n-21w, ru mach. D. Scheig's James 1, ne ne ne 23-1n-2w, dr 325 ft. Associated Oil Co.'s Harrell 1, ne ne sw 13-1s-21w, spd and sd. Selby Oil Co.'s R. C. Holt 1, se se sw 15-2n-20w, spd. Petroleum Prod. Co.'s Cole 1, sw sw se 34-2n-20w, dr 670 ft. Whatley & Whatley's Holt 1, nw sw se 20-1n-20w, dr 400 ft.

KAY COUNTY—Helmerich-Payne's Crouse 1, cne sw 29-25n-1w, sd 5920 ft. Bay Oil Co.'s Hudson 1, sw sw ne 14-28n-3e, set 5-in csg 2945 ft, cemented and dr plugs. S. R. McCorkle et al's Hermes 1, sw sw nw 6-26n-4e, sd 457 ft. Harris-Haun's W. A. Schuessler 1, cnw sw 3-28n-2e, dr 1940 ft. Lancer Oil Corp.'s Hugo Wilde 1, se nw nw 22-28n-5e, lcn.

KINGFISHER COUNTY—Black Gold Pet. Co.'s Cole 1, csw ne 24-18n-5w, dr 4365 ft.

LINCOLN COUNTY — Derrickson & Reserve Pet.'s Law 1, se sw ne 25-14n-3e, rog. Sinclair Prairie Oil Co. et al's Dunbar 1, sw ne 25-15n-4w, td 6907 ft, D&A. Sinclair Prairie Oil Co.'s Boland 1, sw sw sw 25-12n-3e, td 5561 ft, D&A. Charles Balph et al's Young 1, cn½ nw nw 23-15n-5e, rig. Slick-Urschel et al's Miller 1, nw nw se 25-15n-3e, lcn.

LOGAN COUNTY — Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, flowing 30 min daily averaging 199 bbls oil. Shell Petroleum Corp. et al's Hirzel 1, se sw sw 7-16n-2w, coring 4190 ft. Slick-Urschel's Pennington 1, csw ne 10-16n-1w, cellar and pits. J. C. Shaffer et al's Watson 1, cnw ne 15-15n-4w, cellar. Helmerich-Payne et al's Sturgis 1, se se nw 1-15n-2w, dr 5580 ft. Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, mim.

LOVE COUNTY—Amerada Petroleum Corp. & Stanolind Oil & Gas Co.'s Westheimer & Daube 1, nw se se 27-6n-2e, rur.

MARSHALL COUNTY — Paul R. Robb's Vittetoe 1, cne se 11-5s-4e, sd 4955 ft.

McCURTAIN COUNTY—J. V. Schrivner et al's Central Life Association 1, ne sw sw 24-6s-21e, mach.

MURRAY COUNTY—T. E. Revels' Wolfe 1, ne ne ne 18-1n-2e, hfw 2846 ft, D&A. Equitable Oil & Gas Co.'s Scott 1, csl n½ nw sw 15-1s-3e, sd 396 ft. Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, sd 85 ft. C. P. Williams et al's Singleterry 1, se sw nw 25-2s-3e, mach moved out. Gillette & Kroeger's Robbins 1, ne ne se 31-1n-6e, rog.

NOBLE COUNTY—Marathon Oil Co.'s Gilbert 1, ne ne ne 24-22n-2e, dr plugs and bailed down 2000 ft, so&g, lost bailer and si 18 hrs, when opened well flowed 70 bbls oil 2 hrs—1st flow 8 min, 2nd flow 5 min and quit flowing.

OKFUSKEE COUNTY—Delton Oil Co.'s Robinson 1, ne ne ne 18-11n-8e, dr plugs, sso lots of water, D&A. Mid-Continent Pet. Corp.'s Haney 1, sw se ne 24-12n-8e, dr 3635 ft. Amerada Pet. Corp. et al's Jaynes 1, nw sw 20-10n-10e, fsg 2785 ft.

OKLAHOMA COUNTY — Sinclair Prairie Oil Co.'s Hoyt 1, nw sw ne 5-14n-3e, flowed 300 bbls oil 24 hrs, to shoot. R. Carl Larkin's Brobine 1, nw ne 33-13n-5w, rig. J. C. Shaffer et al's Bullard 1, sw sw sw 13-13n-2w, cored 6530-42 ft. Anderson & Kerr et al's Linn 1, sw nw 17-14n-2w, lcn.

OSAGE COUNTY—Peters Pet. Co. & Norbla Oil Co.'s 1, sw sw sw 15-25n-5e, sd 3134 ft.

PAYNE COUNTY — Marathon Oil Co.'s Potts 1, csw sw 27-19n-2e, cored 4687-92 ft.

PITTSBURG COUNTY — McAllister Pet. Co.'s Chunn 1, se nw 29-4n-14e, set 12-in csg 1530 ft, collapsed, sd. Hailey et al's Smithson 1, nw nw nw 35-6n-12e, spd and sd. P. H. Gray et al's Lee 1, nw se 12-5n-13e, dr 650 ft.

PONTOTOC COUNTY — J. D. Sledge & Jack Lynch's Thompson 1-A (twin), sw ne sw 1-1n-7e, dr 4504 ft. Southern Oil Corp.'s Ladd 1, cnw nw 27-3n-7e, dr 2023 ft. Paramount Oil Co.'s Graham 1, sw se sw 13-1n-2e, set 8-in csg 3498 ft, moving in small mach. H. M. Marcum's Magnuson 1, sw se se 23-2n-7e, set 6-in csg 1601 ft, sd 1644 ft. Mudge Oil Co.'s Clampett 1, sw nw nw 10-2n-6e, sd 90 ft. Southern Oil Co.'s Vierson 1, ne ne se 17-3n-7e, mach. Crabb-Craw Oil Co.'s Breco 1-A, se ne sw 3-4n-6e, td 1124 ft, pb 1118 ft, 560 ft oih, putting on pump. Southern Oil Co.'s Walker 1, nw nw sw 11-4n-6e, sd 820 ft.

POTTAWATOMIE COUNTY—C. W. James et al's Neal 1, nw se sw 4-5n-3e, dr 2325 ft.

PUSHMATAHA COUNTY—William Ungerman et al's Messer 1, se sw sw 35-3s-18e, (owdd) set 8-in csg 2595 ft, sd 2690 ft.

SEMINOLE COUNTY — Verser & Clay's Thomas 1, ne se nw 1-6n-6e, sd 2802 ft. Ray Dorris & J. T. Hall's Dorris 1, se sw 31-10n-7e, sd 280 ft, dd. Wofford Drilling Co.'s Abbott 1, ne ne ne 33-8n-7e, rig. Gypsy Oil Co.'s Grayson 1, sw sw nw 13-6n-5e, swab 497 bbls oil 16½ hrs, deepened to 3809 ft, no increase, si. Wofford Drilling Co. et al's Thomas 1, nw nw se 8-6n-7e, sd 1743 ft. Atlantic Oil Co.'s Thompson 1-A, sw se se 15-11n-8e, surface pipe broke running 150 ft 10-in csg, td 3457 ft. Crabtree's Chandler 1, ne se sw 4-5n-6e, spd.

STEPHENS COUNTY—Wm. Angle's Johnson 1, ne ne se 17-1n-8w, td 2473 ft, comp. Wm. Angle's Calloway 1, se se ne 17-1n-8w, lcn.

WEST TEXAS

ANDREWS COUNTY — Fuhrman Pet. Corp.'s W. H. Boner 2-B, sec 25, blk A-43, PSL sur, dr 1950 ft. Humble O&R Co.'s J. S. Means 2, c ne nw sec 11, blk A-35, PSL sur, elev 3163 ft, shot with 400 quarts at 4367-4558 ft, flowed 194 bbls oil first 24 hrs, co cavings; J. S. Means 3, rig; R. M. Means 3, se¼ sec 4, blk A-45, PSL sur, elev 3177 ft, top anhydrite 1876 ft, top salt 1920 ft, dr 3200 ft. Lou Stogner & A. E. Service Drlg. Co.'s J. W. Richards-McWhorter 1, c se ne sec 4, blk A-37, PSL sur, dr 765 ft. W. T. Walsh et al's J. E. Parker-Llano 1, c sw se sec 2, blk A-54, PSL sur, lcn. R. L. York & O. C. Harper's Hereford Stock Farms, Inc. 1, C. Labour 12, League 315, Parmer Co. SL sur, sd 1165 ft.

BORDEN COUNTY—John I. Moore et al's Clayton-Johnson 1, sec 29, blk 32, T&P Ry. sur, T-4-N, lcn.

BREWSTER COUNTY—C. M. "Dad" Joiner et al's W. J. McIntyre 1, sec 31, blk 352, W. J. Mitchell sur, sd 2100 ft. K. H. King & C. R. Franklin's A. S. Gage 1, sec 138, blk B-22, GH&SA Ry. sur, sd 575 ft. Floyd C. Dodson et al's Texas American Synd. 1, c ne ne sec 66, blk 10, H&GN Ry. sur, deep test, lcn. S. G. Smith et al's Mrs. Ed. Decie 1, nwc se¼ sec 7, blk 1, G. T. Ry. sur, dr 310 ft.

CRANE COUNTY—Gulf Prod. Co.'s W. N. Waddell 1-A, c nw nw sec 4, blk B-27, PSL sur, Ordovician lime test, top salt 510 ft, dr 1975 ft. S. S. Strauss et al's Phelps Bros. 1-A, sec 13, blk 31, H&TC Ry. sur, top salt 534 ft, sd in sulphur water 1826 ft. Wahlenmaier Pet. Corp. et al's TP Land Trust 1, sec 33, blk 44, T&P Ry. sur, T-3-S, dr 200 ft.

CULBERSON COUNTY — Anderson-Prichard Prod. Corp.'s H. A. Borders 1, sec 34, blk 69, dr 480 ft.

CROCKETT COUNTY—Humble Oil & Ref. Co.'s S. E. Couch 1, c nw sec 3, blk "QR", D. & S. E. Ry. Co. sur, Ordovician lime test, dr 1305 ft. E. C. Leslie and Hiller et al's J. S. Todd 1, sec 26, blk "WX", GC&SF Ry. sur, sd 580 ft. Miller Bros. et al's fee 1, sec 21, blk 97, PSL sur, sd 2107 ft. Nelwood Drlg. Co. et al's A. L. Hall 1, sec Sec. 11, blk 54½, PSL sur, sd 200 ft.

JEFF DAVIS COUNTY — C. M. "Dad" Joiner et al's Jones-Coffield 1, sec 8, blk 3, H&TC Ry. sur, sp and sd.

DAWSON COUNTY—Fred Turner & Harry Adams Corp.'s John Robinson 1, c nw sec 46, blk "M", E. L. & RR. Co. sur, elev 3078 ft, top salt 1970 ft, top lime 2885 ft, sg 3280 ft. sd 3300 ft.

ECTOR COUNTY—Gulf Prod. Co.'s C. A. Goldsmith 1, c nw sec 10, blk 44, T&P Ry. sur, T-1-S, rig. International Pet. Corp. & O. C. Harper's E. F. Cowden 1, c se se sec 25, blk 44, T&P Ry. sur, T-2-S, dr 700 ft. Neville G. Penrose et al's A. Kloh-Gulf 1, nwc w½ se sec 31, blk 45, T-1-S, T&P Ry. sur, rust.

FISHER COUNTY—Merry Bros. & Perini, Inc.'s E. Howard 1, elev 1849 ft, hfw 2930-80 ft, dr 3280 ft.

GLASSCOCK COUNTY — John I. Moore, Loffland Bros. et al's L. S. McDowell 1, sec 22, blk 34, T&P Ry. sur, T-2-S, Ordovician lime test, elev 2534 ft, top lime 2137 ft, dr lime and shale 8620 ft.

HAMILTON COUNTY—Ireland O&G Co.'s Geo. L. Doyle 1, Isaac Adams sur, elev 1055 ft, dr 1790 ft.

HOWARD COUNTY—S. B. Dorn et al's C. D. Read 1, swc sec 47, blk 30, T&P Ry. sur, T-1-N, rog.

JONES COUNTY—Coltex Oil Co.'s H. N. Smith 1, se¼ sec 25, blk 19, T&P Ry. sur, lcn. H. T. Owen et al's Gibson-Dunwoody 1, sec 6, blk 17, T&P Ry. sur, lcn.

LOVING COUNTY—Mason Oil Co.'s M. Kyle 1, lcn.

LYNN COUNTY—Edgar T. Hart & Wanete Oil Co.'s C. O. Edwards 1, se¼ sec 29, blk 1, L&SV Ry. sur, dr 1300 ft.

MARTIN COUNTY—S. E. Wright & Ralph Scott's F. W. Flanagan 1, nec sec 22, blk 37, T&P Ry. sur, T-1-S, sp and sd.

PECOS COUNTY—Gulf Prod. Co.'n White-Baker 4, swc n½ sec 46, blk "Z", T. C. Ry. sur, dr 45 ft. Shell Pet. Corp.'s University-Carlson 1-A, c ne ne sec 35, blk 16, dr 1845 ft. Trans-Texas Oil Co.'s C. M. Caldwell 1, sec Sec. 27, blk 50, T&P Ry. sur, Tsp. 9, sd 1301 ft.

PRESIDIO COUNTY — Linderman Bros. Oil Corp.'s R. I. Bledsoe 1, sec 15, blk 351, GC&SF Ry. sur, sd 507 ft.

REAGAN COUNTY—Skelly Oil Co. et al's University-Utah 1-D, c sw nw sec 33, blk 8, Ordovician lime test, top Cisco 9174 ft, dr 9385 ft. Dobbs Oil Co.'s W. E. Friend 1 (681-ac), nwc s½ sec 3, Wm. Allen sur, dr 150 ft.

REEVES COUNTY—J. E. Cunningham & A. R. Eppenauer Drlg. Co.'s Tiller Bros. 1, R. P. Altman sur, gas and sulphur w flow bridged off, co 3673 ft. Herbert Oil Co.'s E. M. Williams 1, c sec 17, blk 6, H&GN Ry. sur, lcn.

RUNNELS COUNTY—Blaylock & Co.'s Y. J. McGaughan 1, T. M. Fowler sur No. 444, lot No. 14, sd 750 ft. Grover Hart and J. S. Dennis 1 (325-ac), nec w½ sec 123, E. T. Ry. Co. sur, sp and sd. Melrose Oil Co.'s Mrs. L. P. Wood 1, Willett Holmes sur, No. 100, temporary abn 2507 ft. R. Wells et al's W. F. James 1, D. Diaz & N. Travis sur, sd 850 ft.

SCHLEICHER COUNTY—J. M. Cooper et al's Bert Page 1, sec 40, blk "L", GH&SA Ry. sur, Ordovician test, elev 2270 ft, testing Bend lime 5978 ft. M. D. Bryant et al's J. A. Whitten 1, lcn. W. C. Proctor, Kemper Kimberlin & J. D. Wesner's Judkins-Spencer (Pure) 1, c sw sec 4, Hooper-Wade sur, blk "A", Cert. No. 127, Ordovician test, rig.

SCURRY COUNTY—H. H. Coffield & W. S. Guthrie's O. H. Holliday 1, sec 120, blk 97, H&TC Ry. sur, fsh 2967 ft. C. T. McLaughlin et al's W. C. Allen 1, c ne sec 398, sd 375 ft.

STERLING COUNTY — Merry Bros. & Perini, Inc. & John I. Moore's R. L. Stansbery 1, c sw ne sec 20, blk 30, W&NW Ry. sur dr 775 ft. Eugene Mays et al's W. L. Foster 1, sec 21, blk 13, SP Ry. sur, lcn.

STONEWALL COUNTY—Merry Bros. & Perini, Inc., & Humble's C. L. Williams 1, sec 6, blk "C", AB&C sur, sd 3005 ft.

SUTTON COUNTY—Paul C. Teas et al's C. E. Mower 1, c ne sw sec 39, blk 5, TW&NG Ry. sur, Ordovician test, sd 3250 ft.

TAYLOR COUNTY—H. Crissman et al's Abilene fee 1, sec 66, BAL sur, re-set 10-in cas 1500 ft.

UPTON COUNTY—Gulf Prod. Co.'s J. T. McElroy 103, c nw sw sec 197, blk "F", Ordovician test, elev 2625 ft, top lime 2620 ft, so in lime 10,798 ft, and 10,930-10,960 ft, dr black lime and chert 11,060 ft. Baldridge Oil Co.'s S. Peck 1, sec sec 29, blk 41, T&P sur, T-4-S, lcn. Humble O&R Co.'s L. W. Pollok 1, c nw¼ sec 4, blk "M", E. L. & RR sur, Ordovician lime test, rur, td 335 ft.

WARD COUNTY—Rector Oil Co., Pat Hill et al's Lee Monroe 2, e cor sec 2, blk 1, W& NW Ry. sur, cem cas, td 1910 ft.

WINKLER COUNTY—Fox-Butler & T. J. Jefferies' Brown-Altman 1, nec n½ sw¼ sec 6, blk B-5, PSL sur, dr by junk, td 3098 ft. Barnsdall Oil Co.'s Brown-Altman 1, sec 6, blk B-5, PSL sur, machine. Gulf Prod. Co.'s L. E. Wight 1, sec Sec 20, blk B-40, PSL sur, top anhydrite 1140 ft, top salt 1165 ft, dr 2690 ft. Joe C. Maxwell et al's Oscar Clapp 1, swc n½ sec 37, blk 26, PSL sur, making sulphur water, dr 3435 ft; L. Daugherty 1, nec e½ se¼ sec 11, blk B-26, PSL sur, cem cas 2709 ft. Mid-Continent Pet. Corp.'s J. F. Howe 2, lcn. Magnolia Pet. Co.'s J. B. Walton 5, dr lime 2675 ft. Sid Richardson et al's M. J. Hill 1, swc se Sec 18, blk B-11, PSL sur, elev 2755 ft, top salt 1055 ft, top lime 2255 ft, tested hfw, sd 3846 ft; J. B. Walton-Pure 1, sw¼ sec 1, blk B-3, PSL sur, sd 240 ft. Sayre Oil Co. et al's Lum Daugherty-TP Coal 1, sec s½ se¼ sec 2, blk B-26, making 5,000,000 ft gan, sd for cas, td 2721 ft; J. F. Howe 2, lcn. Sinclair Prairie Oil Co.'s H. E. Cummins 2, nec sec 11, blk 26, PSL sur, dr 2760 ft. Sun Oil Co.'s S. M. Halley 1, sec n½ sec 24, blk B-12, PSL sur, rig. Skelly Oil Co.'s J. M. Halley 2, ne¼ sec 25, blk B-11, PSL sur, elev 2726 ft, top oil pay 2850 to 2867 ft and 2880-2885 ft, td 2907 ft, testing 2500 ft oih.

EAST TEXAS

ANDERSON COUNTY—Gulf Prod. Co.'s Mary J. Ross 1 (54.7-ac), R. Erwin sur, Camp Hill area, rig; M. A. Davey-T. Royall 1 (174-ac), M. Rogers sur, Camp Hill area, elev 572 ft, top Woodbine 5176 ft, carrying sw, top Georgetown lime 5948 to 5969 ft, pb to 5080 ft, tested (est.) 8,000,000 ft gas and spray oil with salt water, sd to pb to 5060 ft. J. W. Luttes et al's C. M. McKee 1 (100-ac), Walter F. Pool sur, 3 mi se of Frankston, dk. Tide Water Oil Co.-Texas Seaboard Oil Co.'s N. N. Wills 21-A, Cayuga field, Trinity sand test, dr 3450 ft.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (319-ac), Jessie Milam sur, elev 272 ft, rig.

CASS COUNTY—A. D. King, Tr., and E. S. White's G. W. Allday 1 (40-ac), R. F. Whittaker sur, 4 mi ne of Linden, elev 288 ft, dk.

CHEROKEE COUNTY—Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw of Jacksonville, elev 433 ft, sd 3505 ft. Rowan-Nichols Oil Co.-Simms Oil Co.'s C. V. Gilbreath 1 (60-ac), (east) H. M. Brewer sur, 1 mi nw of Reklaw, elev 310 ft, top Pecan chalk 3212 ft, dr 3430 ft. E. M. Thomason & Co. Inc.'s W. J. Addis 1 (80-ac), Jessie T. Jones sur, elev 471 ft, sd 2150 ft.

FREESTONE COUNTY — Amerada Pet. Corp.'s H. Berk 1, E. G. Rector sur, Cayuga area, mim. F. A. Gillespie & Son's J, B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¾ mi n of Fairfield, dr 2210 ft. W. G. Turbeville and Guy Warren's W. and A. Ivy 1 (95-ac), F. B. Hardy sur, A-290, 3 mi s of Turlington, elev 412 ft, Pecan chalk 3022-3165 ft, Austin chalk 4127-4450 ft, top Woodbine sand 4831 ft, tested sw in sand 4848 ft and sd.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne of Longview, elev 426 ft, Pecan chalk 2391-2985 ft, sd 3185 ft.

HENDERSON COUNTY—J. C. Crosby and Culp's M. T. Dodd 1 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, elev 376 ft, Pecan chalk 2390-2504 ft, Austin chalk 3456-3610 ft, sd for cas 4049 ft. Great State Oil Corp. (Dick Andrade and R. S. Bond's) R. Sid Ansley 1-A, N. B. Thompson sur, elev 268 ft, sd 895 ft. E. B. LaRue and Pioneer Exploration Co.'s Gentry 1, C. M. Walters sur, lcn.

HILL COUNTY—Humble O&R Co.'s Citizens Nat'l Bank (Denison) 1 (170-ac), N. T. Roberts sur, 2½ mi ne of Mount Calm, elev 631 ft, Austin chalk 581-865 ft, so 1139-41 ft, dry and abn in Del Rio shale 1285-1286 ft.

HUNT COUNTY—D. T. Cauble et al's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur A-1054, 3 mi se of Greenville, sd 1415 ft. Julian C. Hall et al's A. B. Parrish 1 (100-ac), (s) Nancy Danley sur, lcn. H. G. Samson-Shawver et al's J. R. Phillips 1 (53 1/3-ac) W. L. James sur, 2½ mi nw of Commerce, rig.

KAUFMAN COUNTY—L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, 4 mi s of Terrell, elev 453 ft, top Austin chalk 1785 ft, co 2876 ft. G. H. Germany et al's D. Clark 1, S Edens sur, sd 1728 ft. W. E. Gribbins et al's G. W. Martin 1 (140-ac), W. L. C. Butler sur, 2 mi ne Kemp, sp and sd.

LIMESTONE COUNTY—C. F. Carter et al's S. E. Dean 1 (75-ac), Pedro Varella sur, 3½ mi sw of Mexia, sg 705-11 and 961 ft, sd 1717 ft. David J. Crawford et al's Vol DeLong 1 (59.3-ac), Pedro Varella sur, 2½ mi n of Thelma, base Austin chalk 2450 ft, top broken Woodbine sand 2772 ft, td 2801 ft, with so, cem cas and sd. Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, top Nacatoch sand 834 ft, co 852 ft. J. Edward

Mills et al's J. B. Hunt 1 (34⅝-ac), Israel Woods sur, 3 mi ne of Kosse, dr 2690 ft.

MORRIS COUNTY—C. M. "Dad" Joiner et al's Reese 1, T. C. Ry. sur, top Pecan chalk 2000 ft, dr 3545 ft.

NAVARRO COUNTY—W. J. Keeling Estate et al's J. F. Rushing 1 (84-ac), Henry Ford sur, 6 mi w of Currie, elev 530 ft, Austin chalk 2155-2395 ft, top Woodbine sand 2858 ft, cem 5 3/16-in cas 2858 ft, td 2880 ft. L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, sd 625 ft. Syam Oil Co.'s F. Love 1 (300-ac), J. L. Strother sur, Pecan chalk 2206-2320 ft, top Austin chalk 3080 ft, testing 4040 ft. Wm. C. McGlothlin et al's M. A. Dobbin 1 (138-ac), E. Lowry sur A-476, 2 mi n of Corsicana, lcn.

RED RIVER COUNTY—J. S. Abercrombie & Harrison Oil Co.'s J. M. Roberts 1, John Ware sur, 8 mi n of Clarksville, elev 424 ft, top Woodbine 450 ft, top Georgetown lime 744 ft, show heavy oil in sand 1120-1135 ft, sd in shale 1184 ft. J. E. Dinger Oil Co.'s W. T. Norris 1 (351-ac), Joseph Guest sur, 1 mi s of Detriot, dk.

ROBERTSON COUNTY— Steen Drlg. Co. and Dr. W. M. Maness et al's H. A. Sackville 1 (2025-ac), J. M. Viesca sur, dr 3280 ft. H. L. Patton Co.'s W. H. & H. A. Ely 1 (616-ac), Antonio Manchaco sur, elev 392 ft, rig.

RUSK COUNTY—Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e of Pirtle, elev 370 ft, Pecan chalk 2418-2793 ft, Austin chalk 3352-3512 ft, coring lime 3640 ft.

SMITH COUNTY—W. L. Cloud and A. G. Deck et al's Dora Kendall 1, John Williams sur, e mi e of Van field, sd 900 ft. R. W. Fair et al's W. P. Rushing 1 (50.8-ac), Jacob Herrin sur, elev 393 ft, top Woodbine 4296 ft, dry and abn at 4673 ft.

UPSHUR COUNTY—G. W. Berry et al's D. M. Hollins 1, B. Asher sur, lcn.

VAN ZANDT COUNTY—J. C. Acre et al's F. W. Anderson 1 (160-ac), John Blair sur, 4 mi n of Wills Point, sd 2065 ft. American Oil Co.'s J. R. Bryant 1, sd 1325 ft. Joe Cadrin et al's J. F. Bass 1 (16-ac), Wm. Hart sur, sd 1700 ft. Roy I. Carter & Jennings' Sallie McGee 4 (43.4-ac), Blk 20, Wm. Daniel sur, elev 441 ft, sd 1268 ft. A. J. Delcambre et al's A. Crim 2 (48-ac), co 1370 ft. Florence Oil Co.'s Sanger Inv. Co. 1 (50-ac), John Walling sur, sd 3055 ft. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), Blk 14, NCSL sur, fsh 1150 ft. S. L. Olson, Tr and Jensen-Olson Oil Co.'s J. D. Listenbee 1 (46-ac), Wm. Daniel sur, elev 448 ft, Nacatoch sand 1260-1279 ft, testing. L. B. Pruitt et al's G. W. Carter 3 (5.87-ac), Wm. Daniel sur, lcn. Rauch Bros. (Weltex Oil Corp.'s) Bearden-Palmer 1 (61.1-ac), Blk 11, NCSL sur, sd 1237 ft. J. K. Wadley et al's W. J. Carnes 1 (588-ac), S. P. Ry. sur A-887 and T. P. Ry. sur A-283, Pecan chalk 2432-2648 ft, Austin chalk 3746-4095 ft, sd in shale 4200 ft.

WOOD COUNTY—Bryant and Speers' Consumers Lignite Co. 1, F. McMahon sur, 1 mi se of Alba, elev 419 ft, sd 750 ft.

SOUTH TEXAS

BANDERA COUNTY—W. B. Kyle et al's R. L. Duke 1, J. A. Bennett sur No. 7, near Utopia, prep to sp. Plateau Oil Co.'s (Peerless) R. G. Garrison 1, sec 506, GC&SF sur, 8 mi sw Medina, td 1181 ft, new contract to C. L. Smith, rur to dd.

BASTROP COUNTY—Champion Oil Co.'s Chas. E. Anderson 1, 1800 ft sel, 1200 ft nel 578-ac tr, J. A. Navarro sur, well rept abnd several months ago, now dr 1700 ft. Marts & Beavens' R. B. Rivers 2, Standifer sur, ¾ mi sw Elgin, coring 1850 ft. Joe Mills' Mrs. W. H. Caldwell (Eddie M. Pruitt) 1, J. A. Navarro sur, sd 1820 ft. Nelson Puett's J. H. Carroll 2, A. Mays sur No. 19, sp and sd.

BEE COUNTY—Earl Callaway's M. H. Milster 1, C. B. McShain sur, ne Dirks pool, lcn. Dirks Bros.' Foley 1, Keeler sur, 2 mi nw Friendship pool, sand 3408-18 ft, dst 300 lbs. 5 minutes, ¼ ch bottom, 5/16 ch top, 1 gallon mud in bottom of tool showed little oil specks, coring deeper. Ed. Falvey's John R. Scott 1, J. M. Uranga Gr, taken over from Cecil Hagen et al, now sd 3950 ft. Humble's Thompson 2, 466 ft s and w of se cor J. C. Wood 4026-ac tr in Garrett Roche sur, 13 mi se Beeville, ru. Mid-Continent Crude Oil Co.'s A. J. Kimball 2, S. Winship sur, td 3555 ft, set 4½ in csg at td 3548 ft in sdtr hole. George Pace's Goree 1, center blk 26, Tarver-Henslee sub of Thomas B. Barton sur, lcn. Worth Oil Co.'s Rutledge 1, B. Q. Hadley sur, ne Grayburg area, td 3424 ft, 600 ft ds dropped to bottom, fsh.

BEXAR COUNTY—C. A. Campbell's Margaret Cantu 1, J. M. Arocha Gr., dr 750 ft. N. G. Carter's E. & T. Ruiz 1, F. Rolen sur, sd 1672 ft. Keiffer & Jones' E. W. LaGrange 1, F. Rolen sur, testing 586 ft. McPhee & Briggs' Florence Lamb 1, M. de Luna sur No. 4, sd 1065 ft, George O'Neill et al's Holly Crouch 1, M. Gotari sur No. 5, td 1370 ft, r 1340 ft. Duke Phillips' Mrs. Anna Lieck 1, J. Lieck sur, abnd in Edwards below 850 ft, exact depth not rept. Richcul Oil Co.'s Kohler 1, J. M. Baerrera sur, w of Von Ormy pool, dr 450 ft; Rudolph Vogt 1, S. McCullough sur, w Von Ormy pool, sp; Karl Weilbacher 1, S. Jett sur, w Von Ormy pool, dr 650 ft.

BROOKS COUNTY—Helmerich & Payne, Inc.'s Scott & Hopper 1, c sur 44, Palo Blanco Gr, dr 1625 ft.

CALDWELL COUNTY—J. T. Kyle's C. Kurz Ranch 1, blk 1, Klecamp sur, td 4104 ft, taken over from Kurz Oil Prod. Co. to dd, now wait on more equipment.

DE WITT COUNTY—Lefevre & Spice's A. C. Wilkins 1, James Ross sur, 3 mi se Westhoff, dr 1890 ft.

DUVAL COUNTY — Buffalo-Texas Drlg. Synd.'s Escobar 1, San Francisco Gr, 2 mi s Santa Cruz, dr 3815 ft. Continental Oil Co.'s Clara Driscoll Sevier 4-A, sec 448, Driscoll area, set 700 ft sur csg, wocs. Eckhart et al's Southerland 1, sec 188, N. Kohler area, sand 2361-66 ft, set csg, dr out plugs. Humble's Mucio Vela 2, 330 ft sl, 990 ft el n½ sec 42, Loma Novio area, ru. Magnolia's F. W. Herbst 2, sec 70, td 2749 ft, sand 2742-49 ft, swabbed 22 bbls oil 15 hrs; M. Ruiz 1, sec 1, SA&MG Ry. sur, e Hoffman area, dr 3047 ft. W. C. McBride, Inc.'s E. R. Hagist 1-A, sec 265, dr 2350 ft. W. L. Pearson et al's Fitzsimmons 1, sec 291, dr 3450 ft. E. R. Thomas' (Intrepid Oil Co.) Parr Ranch 1, sec 26, dr 4260 ft.

FALLS COUNTY—Davidson et al's Bozeman 1, M. Pryor sur, 6½ mi ne McLellen, dr 2475 ft. C. W. Goeld's W. B. Landrum 1, J. A. Mancheca sur, mim.

FRIO COUNTY—Amerada Petroleum Co.'s Halff & Oppenheimer 3, J. H. Gilman sur No. 16, td 3250 ft, installing blow-out preventer.

GOLIAD COUNTY — Magnolia's V. Albrecht 1, J. P. Reid sur, 7 mi nw Goliad, dr 5295 ft.

GONZALES COUNTY—G. H. VanRossum's W. S. Atkinson 1, S. Y. Reims sur, 2 mi s Thompsonville, taken over from VanRossum & Kyle for 6000-ft test, dk up.

GUADALUPE COUNTY — Diamond Half Oil Co.'s Aubrey Schmidt 1, Wakefield & Stewart sur, 2 mi se Kingsbury, dr 2625 ft, Del Rio. L. E. Trout's Myrtle McKee 1, Green DeWitt sur, sd 2915 ft, top Austin chalk 2893 ft.

HIDALGO COUNTY — Clary, Spencer & Hood's Brock & Showers 1, lot 8, blk 9, Vista Hermosa sub of Por 80, 5 mi sw Monte Christi, dr 2500 ft. Gato Oil Co.'s Brock & Showers 1, blk 26, Por 79, Vista Hermosa sub, 8 mi w Mission, sd 4600 ft. Harrison & Medlin's Garcia Land & Cattle Co. 1, 1½ mi e Samfordyce field, Por. 42, re-dr 2800 ft. King-Woods Oil Co.'s W. M. Doughty 1, Sh 90, San Salvadore del Tule Gr, 15 mi n Edinburg, sd 1863 ft for mchy rep; Osca Daskam 1, lot 23-A, blk 49, King-Wood sub of Daskam land, Por. 41, 3 mi ne Samfordyce field, dr 3625 ft. Union Sulphur Co.'s Am. Rio Grande Land & Irr. Co. 3, lot 2082, blk 86, N. Capisallo Dist., Llano Grande Gr, dr below su csg.

JIM HOGG COUNTY—B. L. Miller et al's Yeager 1, blk 6, sur 20, dr 925 ft. The Texas Co.'s Duval County School Land 1, sur 150, 4 mi w Hebbronville, prep to sp.

JIM WELLS COUNTY—O. W. Killam's W. D. Wade 4, S. A. Agua Dulce sur, dr 2650 ft. Magnolia's A. A. Seeligson 6, V. Canale sur No. 218, sp. Maher & Shira's Schaeffer 1 ,S. Bigham sur, ru. Sinclair Prairie Oil & Gas Co.'s Seeligson 1-A, sec 71, Halman sub, SK&K sur No. 215, dr 2905 ft.

KARNES COUNTY—R. W. Norton's M. E. Choate 2, A. Storey sur, dr 1500 ft. R. G. Tonkin's Miss Olive Henke 1, Seguin Grant, 1½ mi s Falls City, dr below 2700 ft.

KERR COUNTY — Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, sec 1591, td 3530 ft, bailed dry, sd.

LAVACA COUNTY—Humble & Magnolia's C. S. Wilson 1, J. C. Crenshaw sur, sd 7370 ft.

LEE COUNTY—Humble's J. Simons 1, R. H. Hunter sur, near Livingston, dr 3671 ft. James E. Pederson's C. A. Turner 1, D. Hudson sur, near Tanglewood, dr 6480 ft.

LIVE OAK COUNTY—Baugh & McMillan's Walton & Campbell 1, D. R. Fant sur, dr 1750 ft. Berry & Hayes' C. L. Terrell Estate 1, Walter Henry sur, dr 600 ft. Brunson et al's Nichols 1, Ayers sur, dr 760 ft. The California Co.'s G. Blankenship 1, A. A. Dun sur, sp. Henderson Coquat's Little 1, M. M. Shipp sur, sd 5314 ft for orders; H. E. Rex 1, (taken from Luling Oil & Gas Co). GH&H sur No. 1, mim. Lion Oil Refining Co.'s McNeill 3, Jane Curry sur, dr 2500 ft. Lee McCoy et al's Ross Murray 1, J. Hefferman sur, sd 410 ft.

McMULLEN COUNTY — Howard & Claunch's Claunch 3, 1200 ft swl, 1800 ft sel, M. Hely sur, lcn. Points et al's W. Fahler 1, Pittuck sur, dr 325 ft. Stewart, Smith & Storey's L. Jacob Corp. 2, John Fadden sur, s Jacob pool, td 867 ft, cleaned self, showing lots of gas, trying to complete as oil well. Texas Petroleum Co.'s Two Rivers Ranch 1, 1130 ft el, 330 ft sl NE sec 65, dr 300 ft. Witherspoon Oil Co.'s Fisher 1, 200 ft nl and el blk 19, R. O'Boyle sur, nw Caliham field, sp.

MILAM COUNTY — C. F. Drake et al's Standard Coal Co. 1, G. L. Johnson sur, td 1569 ft, move in larger dk and rig. Second National Bank's B. P. Ward 1, L. Taylor sur, dr 3219 ft.

REFUGIO COUNTY — Magnolia's F. B. Rooke 1, Dona A. Reojas sur, 2 mi w Woodsboro, dr 5995 ft. Quintana Petroleum Co.'s Tom O'Connor 2-B, M. L. White sur, e Refugio, coring 7825 ft.

SAN PATRICIO COUNTY — Heep Oil Corp.'s Welder 1-B, Portillo sur, dr 4630 ft. Humble's Welder 1, Lot 4, Atkins & O'Neil sub of Villareal Gr, dr 2180 ft. Plymouth's E. H. Welder 2-B, M. Musquiz sur, dr 6515 ft. Stanolind's J. J. McMillan 1, lot 12, Fulton Pasture sub of P. Fitzsimmons sur, sw Sinton, ru.

STARR COUNTY—Carpenter & Vernon et al's Garcia Land & Cattle Co. 1, Jor. 100, nw Samfordyce field, dr 2400 ft. John Clopton's Roos et al 1, Por. 92, coring 2355 ft. Conroe Drlg. Co.'s Guerra 1, blk 35, Crawford sub, Por. 56, fsh 2040 ft. Conway & Emanuel's Starr County Cattle Co. 1, blk 57, J-L sub Por. 89, s Barbacoas pool, coring 2515 ft. Crawford et al's Hicks & Phelps 1, Pedernal Gr, sd 1500 ft. H. L. Curry's Kelsey-Bass 1, sur 8, Por. 76, sp. Lester & Duffield, Inc., & R. H. Vice's E. B. Carruth et al 1, Share 1-B, Por. 91-92, td 4011 ft, ran electric formation tester, sd. Merren, Johnson & Bond's Starr County Cattle Co. 3, blk 37, Por. 89, test sw and oil 2690-2709 ft, to dd. Morris & Bryan's Hicks et al 1, Pedernal Gr, prep to mim. H. Reed's F. Doyno 1, blk 6, Por. 80, sp. C. L. Smith & Gholston Drilling Co.'s Longfellow 1, sec 281, dr 5330 ft. Dale Sneed's Guerra 1, Sh. 92, Por. 86, dr 200 ft. Sunray Oil Co.'s Sanchez 1, sec 344, 12 mi n Roma, testing sand 3665-93 ft. E. L. Younkins et al's Kelsey Bass 1, blk 19, B&B sub of Por. 87, dr 2610 ft.

TRAVIS COUNTY—B. Pruitt's Pearson 1, 150 ft swl and sel 100 ac tr, L. Kimbro sur, prep to sp. C. A. Stubbs' Julius Kerlin 1, I. Lindsay sur No. 61, dr 1050 ft. J. C. Tittle et al's Johnson 1, L. Kimbro sur, dr 970 ft.

WEBB COUNTY—Mills Bennett's Slator 1, blk 46, Mission sub, Borrego Gr, dr 2210 ft.

WILLACY COUNTY—South Texas Development Co.'s P. Armendiez 1, share 4, near Sebastian, dr 2650 ft.

WILLIAMSON COUNTY — Burns & Schramm's Bruns 1, J. W. Fischer sur, sp. Fritz Fuchs et al's H. M. Pfluger 1, J. Sapington sur, dr 610 ft. Johnson & Ray's M. S. Oxford 1-B, Williams sur, Tr. 6, Shelby sub, sp and sd. G. L. Rowsey's Lee Lawrence 1, W. West sur, 1 mi n Chapman field, 350 ft nwl, 900 ft swl of 70.25-ac tr, sp. Seggern et al's Clyde Linder 1, S. Woodruff sur No. 5, abnd, depth not reported.

ZAPATA COUNTY—Cliff Dirks' Hinnant 1, blk 16, sur 116, sd 1562 ft. Danvers & Harrison's N. J. Vela 1, blk 7, Vela sub, Por. 29, sd 1850 ft. Virginia Hardy's M. D. Slator 1, blk 65, Mission Oil Co. sub, Slator Ranch, Borrego Gr, td 21 ft, owdd, was started by H. & M. Drg. Co., ru to dd. Joe Palmer's J. M. G. Martinez 1, blk 27, sec 434, dr 900 ft.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Bergendall et al's Buchanan 1, W. M. McIlvain sur, claim sand with so 3677-82 ft, cemtd 5 3/16 in csg, arr dr plug, td 3682 ft.

MARION COUNTY—Ed S. Holman's Henderson A-1, R. Bennington sur, sd 1600 ft (corrected depth), cur titles. W. H. Oberthier's East Texas Ore & Dev. Co. 1, Walter H. Gilbert sur, sd for fuel 3657 ft.

PANOLA COUNTY—Neel & Nixon's Rushing 1, Mary Smith sur, rur.

TEXAS GULF COAST

ANGELINA COUNTY—Koch & Duffey's L. W. Alberry 1, near Diboll, J. A. Prado sur, preparing to make a drill stem test at 1260 ft. E. B. La Rue's W. D. Ivey 1, near Huntington, Scarborough sur, dr shale 1403 ft.

BRAZORIA COUNTY—Amerada's Houston Farms Dev. Co. 1, Rattlesnake Mound prospect, L. G. Bachelder sur, td 7040 ft, lost 100 ft 8¾-in csg. Luling Oil & Gas Co.'s M. J. Jamison Est. 1, 4 mi w of Angleton, C. Smith sur, dr gumbo 1403 ft.

BRAZOS COUNTY—All wells are sd.

CHAMBERS COUNTY—Humble's A. Middleton 1, 6 mi e of Annaunch, H. & T. C. sur, sec 58, dr sandy shale 5638 ft. Sun's Hamilton 1, 5 mi sw of Sea Breeze, T. & N. O. sur, sec 128, dr shale 7931 ft.

COLORADO COUNTY—Danciger Oil & Refining, Inc.'s Raver 1, w of Garwood, BBB &C sur, dr shale 6333 ft.

GALVESTON COUNTY—Texana Gulf Oil Co.'s T. Shaw 1, Galveston Island, E. Hall & L. Jones sur, dr shale 6197 ft.

GRIMES COUNTY—All wells are sd.

HARRIS COUNTY — Red Bluff Oil Co.'s Seureau 1, 3 mi w of Red Bluff, Wm. R. Harris sur, sd 5938 ft. T. S. & F. Oil Co.'s J. B. Hines 1, 1½ mi sw of Lynchburg, A. McCormick sur, dr shale 3110 ft. Turnbull & Irwin's Brooks Est. 1, R. R. Vince sur, dr shale 4524 ft. Walter Goldston et al's Weingarten 1, Ogburn area, H&TC sur, sec 39, block 2, dr shale 6070 ft.

JEFFERSON COUNTY—Sun's Long 1, sw Nome, J. Blair sur, preparing to pull tubing, td 9045 ft.

LIBERTY COUNTY—Liberty Independent Oil Co.'s J. M. Neal, se of Davis Hill Dome, S. Strong sur, coring shale 3665 ft.

MONTGOMERY COUNTY — W. C. Keeble's T. S. Foster Est. 1, e of Esperanza, J. M. De La Garza sur, setting 10-in csg at 120 ft.

MATAGORDA COUNTY — Cockburn Oil Co.'s Hawkins 6, Sheppards Mott, D. McCarthy sur, dr shale 5484 ft. H. M. Smith Corp.'s Wadsworth Est. 1, Mad Island prospect, S. R. Fisher sur, lot 3, block 5, sd 3425 ft.

POLK COUNTY—Smith & Thompson et al's E. Hayens 1, e of Leggett, Whitmire sur, wocs 275 ft. West Prod. Co.'s W. T. Carter 1, se of Livingston, S. Hirams sur, spudded.

ROBERTSON COUNTY — Steen Drilling Co.'s Sackville 1, M. M. Viesca sur, dr shale 4193 ft.

SAN AUGUSTINE COUNTY—Fidelity Exploration Co.'s Flournoy & Bryan 2, near No. 1, S. P. R. R. Sur. No. 14, dr shale 1657 ft.

WALKER COUNTY — Seaport Oil Co.'s Ross 1, w of Huntsville, Wm. Hodge sur, dr shale 3580 ft.

WALLER COUNTY—Stanolind's Thorp 1, due w of Katy, M. Bennett sur, preparing to run an electrical logging device at 7647 ft. Smith et al's J. R. Garrett 1, e of Milhiem, S. M. Williams sur, coring shale 3747 ft.

WHARTON COUNTY—Whithead & Rash's Kountz 1, se of Louise, S. A. & M. G. sur, mim.

LOUISIANA GULF COAST

ACADIA PARISH—Humble's Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr shale 7639 ft. Avalon (Superior Oil Prod. Co. & Woodley Pet. Co.) Oil Co.'s Dr. Newman 1, Churchpoint, sec 24-7s-1e, dr shale 7311 ft.

AVOYELLES PARISH—Southern Star Pet. Co.'s I. G. Boyette 1, sec 28-3n-5e, wocs 444 ft.

CALCASIEU PARISH—Gulf Refining Co.'s W. H. Stark et al 1, 6 mi s of Vinton, sec 26-11s-12w, dr shale 4174 ft. Wheeler Oil Co.'s W. B. Gabbert 1, 7½ mi e of Lake Charles, sec 28-9s-7w, dr shale 8000 ft. Fred Oil Co.'s Faist 2, 900 ft se of No. 1, sec 26-8s-10w, dk.

CAMERON PARISH—The Texas Co.'s Jessen 1, 1 mi s of Calcasieu Lake, sec 24-14s-10w, fsh 6813 ft.

JEFFERSON PARISH—The Texas Co.'s Bayou St. Denis 1, 6 mi se of Lafitte, sec 19-17s-24e, ru. Strake Oil Corp.'s Calcasieu National Bank 1, 3 mi sw of Woodlawn, sec 12-9s-6w, fsh 8091 ft.

LA FOURCHE PARISH—Emerald Pet. Co.'s Bowie Lbr. Co. 1, ne of Bayou La Fourche, sec 53-15s-18e, dr water sand 8000 ft.

PLAQUEMINES PARISH—E. H. Howe's Buras Levee 1, e side of Vince Dome, sec 26-21s-30e, dr cap rock 1900 ft.

ST. LANDRY PARISH—Bailey Gaunce's Lewis 1, sec 29-6s-5e, abd 5043 ft.

TANGIPAHOA PARISH—R. A. Conklin's Lake Superior Piling Co. 1, sec 19-5s-9e,

NORTH LOUISIANA

BIENVILLE PARISH—Duncan & Fuller's J. Hutton 1, nw nw 4-18n-7w, elev 233 ft, top Midway 1370 ft, top Saratoga chalk 2240 ft, top Arkadelphia 1944 ft, top Blossom (Ozan) 2800 ft, missed ds test 2806 ft, sd 3250 ft shale. Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, elev 162.4 ft, top Wilcox 306 ft, Bass Annona chalk 2508 ft, arr res 2670 ft.

BOSSIER PARISH — Howard & Scott's Sherrill 1, nw sw 13-18n-12w, rur. L. R. Skidmore's Davis 1, se se 12-18n-13w, arr core 1016 ft, top of Nacatosh.

CADDO PARISH—Ed Bailey's Hartzo 1, ne nw 28-22n-15w, dk. California-Louisiana Dev. Co.'s W. E. Glassell 1, sw sw 29-20n-14w, spd 10-in csg cemtd 40 ft.

CATAHOULA PARISH—Phillipi et al's La. Central Lbr. Co. 1, nw se 2-9n-6e, owdd, td 3016 ft (was Geo. Greer et al's Cent. Lbr. Co. B-1).

CLAIBORNE PARISH—K. C. Bundy et al's J. K. King 1, 12-21n-7w, dk. J. C. King et al's Odis Webb 1, nw nw ne 21-21n-8w, 10-in csg 40 ft, dr 400 ft. E. T. Oakes et al's nw nw ne 1-20n-5w, mim.

DE SOTO PARISH—Century Oil & Drilling Corp.'s J. M. Norton 1, sw ne 27-11n-14w, dr 2650 ft lime. Dempsey & Manziel's Thigpen 1, ne sw ne 33-13n-13w, elev 267 ft, wosr, td 1745 ft chalk. P. G. Frailey et al's J. E. Stell 1, ne ne 5-12n-16w, dk. Leslie Prod. Co.'s J. W. Ramsey 1, se nw 36-11n-11w, sd 200 ft. J. T. McCormick et al's Harris 1, sw se 11-13n-14w, mim.

EAST CARROLL PARISH—Century Oil & Drilling Corp.'s Olivedell Plantg. Co. 1, 56-21n-12e, sd 170 ft.

NATCHITOCHES PARISH—Roy Raines et al's Fee 1, sw sw 28-9n-10w, sd for csg 3145 ft. B. E. Taylor's De Blieux 1, 83-10n-7w, dk. Leslie Prod. Co.'s Tom Moffitt 1, se nw 19-10n-10w, lcn.

RED RIVER PARISH—Sterling O&G Co.'s Long-Bell Lbr. Co. 1, se ne se 19-13n-9w, dr 1900 ft.

ARKANSAS

ARKANSAS COUNTY—Grand Prairie Dev. Co.'s Fischer 1, nw ne nw 6-6s-4e, dr 2400 ft.

ASHLEY COUNTY—J. D. Houseman et al's Bovine Farms 1, ne ne 1-18n-8w, rur.

HOT SPRINGS COUNTY—R. E. Morris' Morris & Lang 1, sw sw 19-6s-17w, dr 450 ft.

LA FAYETTE COUNTY—W. H. Harvey's A. M. Allen 2, se sw 18-19-24, sd 850 ft. R. F. Allen 1, ne se sw 13-19-25, lcn. Kamon & Neely's Red River Lbr. Co. 1, sw sw 26-19-25, rur. S. H. Riggs et al's J. M. Enyart 1, se nw 35-15-24, dk.

LONOKE COUNTY—J. C. Strahan's Hardin 1, nw nw 18-2s-7w, dr 1600 ft.

MILLER COUNTY—King Oil Corp.'s C. H. Schroeder 1, sw ne 24-14-28, claim so 3103 ft, sd 3160 ft. Lee Timberlake's Frost Est. 1, sw sw se 27-15-26, dr 1575 ft.

OUACHITA COUNTY—T. J. Gaughan et al's M. Bragg 2, nw ne se 25-13-18, elev 129 ft, cemtd 6-in csg 1340 ft, td 1360 ft; Cartier 1, ne sw se 25-13-18, pb to Nacatosh at 1390 ft, old td 2500 ft. S. J. Carnes' P. Highsmith 1, nw ne nw 25-13-18, spd and sd. L. Caldwell 1, nw nw 12-14-19, 10-in csg 100 ft, sd 900 ft.

UNION COUNTY—Gulf Ref. Co.'s Werner Lbr. Co. 49, 5-16-16, rur. (8000 ft test). Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, 6⅝ in csg 2746 ft, sd cur titles, 2758 ft. C. H. Murphy's Union Sawmill Co. 1, nw se 29-18-11, elev 100 ft, top red beds 2820 ft, sd 3300 ft for fuel. Geo. L. Pace's Union Sawmill Co. 1, ne ne sw 24-18-12, sd 1710 ft. Reuter Oil Co., Inc.'s Kinard 1, nw se nw 32-18-14, sd repr pumping unit, td 2189 ft; Vines 2, nw sw se 29-18-14, 6-in csg 2150 ft, swabbing, td 2207 ft.

MISSISSIPPI

FORREST COUNTY—Gulf Ref. Co.'s Batson-Hatton Lbr. Co. 1, lcn not given, mim.

HARRISON COUNTY—Gulf Ref. Co.'s Ingram-Day Lbr. Co. 1, se se 22-6s-13w, dr 3505 ft.

ISSAQUENA COUNTY — Pelican Oil & Gasoline Co.'s Martin G. Bender 1, nw nw 11-12n-8w, elev 105 ft, 7-in OD csg 3079 ft, top gas rock, sd cur titles, td 3227 ft, red sandy shale.

MONROE COUNTY—P. J. McAlpine et al's Chas. Rye 1, se sw 22-15s-17w, arr shoot formation, td 2917 ft. Frank Rye 1, sw ne sw 15-15s-17w, sd 2910 ft. Crook 1, ne ne 4-13s-18w, sd for csg 1514 ft, gummy shale.

MONTGOMERY COUNTY—D. C. Schaffer et al's, Fee not given, 31-19-7w, lcn.

SIMPSON COUNTY—Berry Corp.'s J. N. Little 1, ne ne 32-10n-21e, rur.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 2 (formerly carried R. L. Parker 1, second hole), nw nw 14-14n-1e, rur, elev 80 ft.

WINSTON COUNTY—Jack Vale's Moody 1, nw sw 3-13n-14e, dr 805 ft.

ALABAMA

BALDWIN COUNTY—Danciger O&R Co.'s U. S. Government 1, Fort Morgan Reservation (536-ac), spd setting surf csg.

CONECUH COUNTY—Ray L. Estabrook's Miller Lbr. Co. 1, w½ w½ ne 1-4n-12e, 9-in OD csg 986 ft, dr 2900 ft, chalk (Selma.)

COVINGTON COUNTY—Geometer Prod. Corp.'s A. B. Culbreth 1, sw sw ne 8-2n-14e, dr 1300 ft.

PIKE COUNTY—Alabama Drilling Co.'s Faulk 1, nw nw 31-11n-21e, rur.

FLORIDA

HILLSBOROUGH COUNTY—Southern Pet. Co.'s Mizell & Williams 1, 4-32s-21e, elev 120 ft, dr 1680 ft.

WALTON COUNTY—Geometer Prod. Co.'s Walton L & T Co. 1, ne ne 10-1s-19w, sd 700 ft.

MICHIGAN

MIDLAND COUNTY — McClanahan Oil Co.'s Hamlin 1, 14n-2w, sec 29, dr 1350 ft. Goll-Graves-Mechling's Oviatt 1, 16n-2e, sec 24, sd 950 ft. Foster & Wicklund's Neal 1, 16n-2w, sec 13, sd 155 ft.

ISABELLA COUNTY—Michigan Gas & Oil Co.'s Hanson 1, 13n-4w, sec 33, rig. G. G. Hanner's Dargitz 1, 13n-4w, sec 20, sd 335 ft. Pure Oil Co.'s Baker 1, 13n-5w, sec 15, dr 3000 ft.

OGEMAW COUNTY—Lupton Oil Co.'s Rakestraw 1, 24n-3e, sec 35, rig. Patterson & Louis' Price 1, 22n-3e, sec 31, rig.

MONTCALM COUNTY—L. E. Duvall's Eiknorch 1, 11n-10w, sec 13, sd 1343 ft. J. W. Leonard's Dubrin 1, 10n-5w, sec 11, sd 1279 ft. Golden Oil Co.'s Steffenson 1, 10n-8w, sec 5, rig.

MECOSTA COUNTY—Gordon Oil Co.'s Brisboy 1, 13n-7w, sec 8, dr 1650 ft. Secord Oil Co.'s Van Houghton 1, 13n-7w, sec 35, sd 175 ft. Alma-Mecosta Synd.'s Sullivan 1, 14n-8w, sec 19, lcn. Jetter Oil Co.'s Parsley 1, 14n-10w,

sec 19, sd 300 ft. Hall Be Oyle's Henry 1, 13n-8w, sec 1, lcn. Columbia Oil Co.'s Freeman 1, 13n-8w, sec 24, lcn. Lakeside Oil Co.'s Dye 1, 15n-8w, sec 23, dr 650 ft. Jasmid Oil Co.'s Coopersville Bank 1, 13n-10w, sec 22, rig. Vale & Ward's Flowers 1, 15n-7w, sec 33, sd 347 ft. Sherman Drilling Co.'s Scheibe 1, 15n-7w, sec 13, dr 130 ft. Consumers Royalty Co.'s Case 1, 15n-7w, sec 23, rig.

GLADWIN COUNTY—M. F. Whitehill's Spicer 1, 17n-2w, n½ sw nw-11, br. Roosevelt Oil Co.'s Haviland 1, 17n-2w, sec 4, fsg 390 ft. Sun Oil Co.'s Hines 1, 17n-1w, sec 31, hole lost 390 ft, skidding rig.

SAGINAW COUNTY—Chapin Oil Co.'s Sutlif 1, 9n-1e, sec 16, sd 2550 ft. Great Northern Oil Co.'s Olmstead 1, 13n-3e, sec 23, lcn.

LIVINGSTON COUNTY—Talbot Oil Co.'s McPherson 1, 3n-4e, sec 35, csg 4960 ft. H. Snell's Zebb 1, 2n-5e, sec 34, sd 5017 ft.

MISC.—Gratiot County: Charles Weller's Baker 1, 9n-3w, nw sw nw-9, ru. Allegan County: Bear Creek Dev.'s Fors 1, 3n-14w, sec 29, dr 1590 ft. St. Clari County: P. D. Bornman's Boldt 1, 8n-16e, sec 28, rig. Mason County: Draggon Development's Young 1, 17n-15w, sec 15, sd 1590 ft. Tuscola County: W. F. Wiecher's Gray 1, 12n-8e, sec 8, ru. Huron County: Wallace Markle's Opaka 1, 15n-11e, sec 4, rig. Roscommon County: Black Diamond Oil Co.'s Vaughan 1, 24n-4w, sec 28, fsg 2780 ft. Kent County: Bryan and Martin's Aldrich 1, 8n-11w, sec 3, dr 2650 ft. Alcona County: Black River Oil Co.'s Ranger 1, 28n-9e, sec 22, rig. Mainstee County: T. K. Buzard's Chamberlin 1, 24n-16w, sec 14, sd 1088 ft.

Allis-Chalmers "Open House" Is Attended by 30,000

Allis-Chalmers Manufacturing Company's "open house" party, Saturday, January 19, was attended by a crowd estimated at 30,000. The morning hours were reserved for the families of employes in the Milwaukee works during which time some 19,000 persons were escorted through the 155-acre plant.

A luncheon for out-of-town guests was followed by special tours and demonstrations in the factory during the afternoon. Chief attractions were the huge hydraulic turbines for Boulder Dam, but the eight departments of the company also showed literally hundreds of other products. From the smallest Texrope drive, weighing a fraction of a pound, to a similar drive of 500 horsepower; from the smallest centrifugal pump to the 800-pound pressure "Rannett" pipe line unit; from the smallest motors to the 135,000-horsepower turbine; from the smallest farm machine to the largest industrial crawler tractor, the products of the company were shown to the visitors.

Among other demonstrations was the two million volt surge generator producing artificial lightning and exploding 25 feet of wire in a millionth of a second. The largest boring mill in America was on display. This machine handles castings up to 40 feet in diameter and 16 feet in height. Some of the other extra large equipment in the plant include cranes for handling castings weighing up to 120 tons, which can be produced in the Allis-Chalmers foundry.

NEWS *from the Industry's* EQUIPMENT MAKERS

Three California Manufacturers Making Tour of South America

With the increase in foreign business indicating an extensive application of American oil equipment during the coming year, three California manufacturers of oil tools recently have sent representatives to visit South American fields. The trip will be made by plane with J. W. MacClatchie, representing MacClatchie Manufacturing Company of Compton; S. R. (Pinky) Robinson representing Alexander Anderson, Inc., of Fullerton, and O. P. Yowell Service Company of Los Angeles. Mrs. Robinson will accompany them.

The plane, a six-passenger Ryan monoplane, belonging to MacClatchie Manufacturing Company, left Glendale on January 16. The trip will take from two to three months with the itinerary including stops at El Paso and Brownsville; Tampico and Mexico City in Mexico; Cristobal in the Canal Zone; Bogota in Colombia; Maracaibo in Venezuela; and Port of Spain, Trinidad.

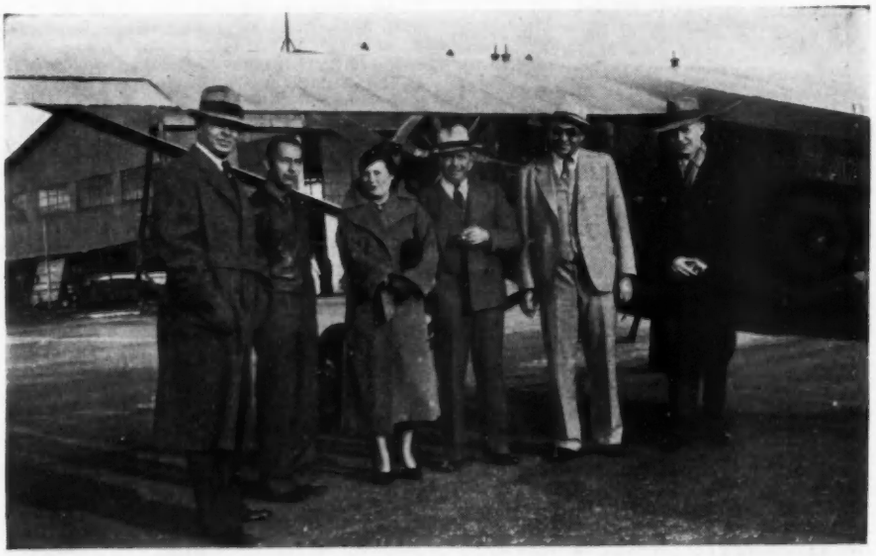
Contacts will be made with the executives and field men in the various oil producing areas that will be visited. Mr. MacClatchie will present all his company's line including mud pump pistons, valves and liners, "Hydro-Seal" plug valves, cement heads, blowout preventers, wall scrapers, reamers and underreamers, automatic catheads, etc. Mr. Robinson will handle the Anderson photo-record single-shot survey instrument, an apparatus run into a well on the sand line that provides a permanent photographic record on metal rimmed discs of the inclination and direction in open hole at any depth; and the Yowell well cleaning devices, Yowell perforation cleaner, cement bailer and Richart perforator.

Caterpillar Machinery Show Attended By 25,000 Visitors

More than 25,000 visitors attended the machinery show held in the mammoth display room of Caterpillar Tractor Company at Peoria, Illinois, from January 8 to 26. The exhibit was held in connection with the company's international reunion, which was attended by over 700 dealers and company men representing 26 nations.

Machinery valued at $500,000 was displayed by more than 50 manufacturers of road building, agricultural, construction, earth-moving, mining and logging equipment. The display covered three acres of floor space.

Demonstration of the "Caterpillar" Diesel in pipe line work and general utility in the oil fields was one of the major features of the show. Side booms, single and double drum winches, hoists, compressors and tractor-mounted arc welders were all on display and commanded the attention of oil men.



(From left to right) S. R. (Pinkey) Robinson, representing Alexander Anderson, Inc. and O. P. Yowell Service Company; Pilot Leo Root; Mrs. Robinson; J. W. MacClatchie, representing MacClatchie Manufacturing Company; O. P. (Happy) Yowell; and Alexander Anderson.

The Corbett Corporation Representing Homestead Valve

The Corbett Corporation, Houston, Texas, has been appointed distributor in Texas and Louisiana of Homestead valves, manufactured by Homestead Valve Manufacturing Company of Coraopolis, Pennsylvania.

The Homestead quarter turn valve has a carefully machined seating surface, individually fitted and lapped into the seating surface in the valve body. The plug is kept in its seat by the patented Homestead cam, but at the same time is free enough to be readily turned. A distinguishing feature of the valve is that it can be closed with a quarter turn; the only effect of further effort to turn the stem is to force the plug more firmly in the seat. A slight motion in the contrary direction immediately releases the cam and the plug turns easily.

The Corbett Corporation will distribute the complete line of Homestead valves, including Homestead straight-way valves, Hovalco angle blow-off valves, Homestead three-way and four-way valves, Hovalco angle blow-off valves, Homestead-Ross air valves, and Homestead protected seat operating valves.

Globe Oil Tools Appoints New Vice-President and Gen'l Manager

J. H. Howard has recently been appointed vice president and general manager of Globe Oil Tools Company to succeed J. C. Wright who resigned as president and general manager.

Mr. Wright leaves the organization with the best wishes of the officers and directors and of the many friends he has made during the time he has been with the company.

It will be the policy of the present management to continue with the same high quality tools and with the same service and operating policies which have been in force since the inception of the company.

J. H. HOWARD

Twenty members of the sales and service staff assembled recently at the headquarters of Houston Oil Field Material Company in Houston for a conference to formulate plans for 1935. This organization now has more than 50 representatives and has stores located at points of leading activity from Houma, Louisiana, on the east to Eunice, New Mexico, on the west, and from Sam Fordyce, Texas, on the south to Kilgore on the north.

Bottom row, left to right: Joe Duncan, store manager, Eunice, New Mexico; Joe Teuton, store manager, Houma, Louisiana; Howard Salter, Louisiana sales; Charlie Smith, district manager, Freer and Sam Fordyce; Albert Peters, store manager, Kilgore; Herman Moon, Gulf Coast sales; Carroll Graham, store manager, Lake Charles; G. W. Hunt, Houston city sales; and W. B. Stallings, store manager, Houston.

Top row, left to right: W. F. Hunt, Kilgore salesman; W. M. Garney, Houston office; J. E. Lassiter, Gulf Coast sales; Ted Brouilette, Houston office; A. W. Waddill, Houston city sales; George O'Leary, vice president and general manager; Bob Ewen, auditing and credits; J. E. Peters, secretary-treasurer; Jack Clark, vice president; Ed Robertson, Beaumont city sales; and L. L. Talley, Houston office.

Mr. Howard, formerly production manager of the company, has been connected with Globe since its inception and is particularly well qualified for his new position due to his knowledge of oil field problems. Mr. Howard, before being with Globe Oil Tools Company, was chief engineer for W-K-W Company and previous to that had been connected with General Petroleum Corporation.

Exposition to Have Inventors Section Again This Year

Houston.—Following a practice started at the show last year, the Sixth Annual Oil Equipment and Engineering Exposition to be held at Houston April 8 to 13, inclusive, has reserved a special section in which space will be furnished without cost to inventors for exhibiting their new patents, models and inventions of oil field equipment and devices.

Inventors in all parts of the United States and other countries are being invited to take advantage of this opportunity to make connections with manufacturers. In turn, manufacturers who are constantly on the look-out for new material will find this department of the exposition of particular advantage.

In providing this section without cost to inventors, many of whom otherwise never would have opportunity to place their ideas before the petroleum industry, exposition officials are seeking to do their part in getting new ideas and inventions into actual practice by the industry as quickly as possible.

The new invention department of the exposition will be in charge of Lester B. Clark, patent attorney of Houston. Awards will be made for the patents or inventions considered of greatest merit. Among those who will comprise the committee of judges are Chase E. Sutton, Manager of the Gulf Coast Division, The Pure Oil Company, and Stanley Gill, consulting petroleum engineer.

E. L. Clark Heads New Houston Office for Walworth

The Walworth Company, 60 East Forty-Second Street, New York City, has announced the appointment of E. L. Clark as manager of its Houston office, 1117 Second National Bank Building. Mr. Clark started with the company in 1930, and since that time has spent 2½ years in the East Texas field and about two years in the Southwest Texas territory.

E. L. CLARK

New Equipment for the Field

Machinery .... Tools .... Catalogs .... Books

▼ ▼ ▼

Plastic Material

THE B. F. GOODRICH COMPANY

A new plastic material, said to be superior to rubber for the manufacture of a wide variety of products, has been developed by the research departments of The B. F. Goodrich Company, Akron, Ohio.

The material, perfected after extensive experimentation, may be molded into any shape, resists the action of various chemicals injurious to rubber, and possesses even greater flexing life than rubber, according to Goodrich engineers.

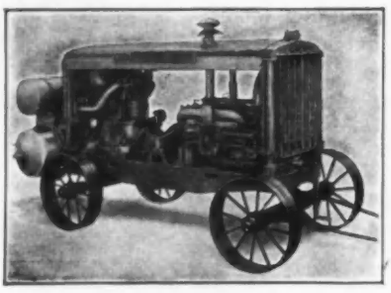
Known as "Koroseal" the new Goodrich product is not expected to replace rubber in general use but will be applied in some instances where rubbery consistency, combined with superior resistance to certain oils and chemicals and where flexing is required.

Compressors

CHICAGO PNEUMATIC TOOL COMPANY

Chicago Pneumatic Tool Company, New York City, has announced an entirely new two-stage, air-cooled portable compressor and a new design in a horizontal, single-stage, Type "T" compressor.

The manufacturer claims the new portable compressor marks an advanced step in design because of its simplicity; accessibility; extreme smoothness of operation by a six-cylinder engine; greater economy through improved intercooling, low air velocities, economical force feed lubrication, and new gasoline engine economy; lower maintenance cost, with fewer parts to maintain, full floating piston pins (no seizures nor cylinder scoring), superior valve design, and force feed lubrication; free-air unloading system; full force feed lubrication; self-adjusting trouble-free clutch; and cast steel neck.



Chicago Pneumatic Portable Compressor

The two-stage, portable type may be obtained with a Diesel engine drive or a gasoline engine drive. Full information is contained in Bulletin No. 758, which will be mailed upon request.

The horizontal, single-stage compressors, Type "T," are equipped with Simplate valves, roller bearings. The advantages and improvements embodied are easily removed cylinder heads, wide piston face, large end cover for inspection and adjustment, oil pocket flood lubrication, wedge adjusted connecting rod with no shims used, deep accessible stffing box, crankshaft accurately balanced with two counterweights, and two double row tapered roller bearings on main drive.

This type may be obtained in either a V-belt drive or a synchronous motor drive which is direct connected. Cylinder diameters range from six to 20 inches, and the stroke from seven to 13 inches. The speed ranges from 400 revolutions per minute for the smaller models to 275 revolutions per minute for the larger models.

Regulator

FISHER GOVERNOR COMPANY

Fisher Governor Company, Marshalltown, Iowa, has announced the new Fisher Cycle Regulator. This new cycle or intermittent flow controller has been developed especially for controlling the input high pressure gas to oil wells being flowed with the intermittent gas lift system. Many outstanding construction features are included in this new controller which has been fully proved by numerous installations in the Oklahoma City field, the manufacturer claims.

Fisher Cycle Regulator

The main valve consists of a single steel body, sizes one-inch to two-inch inclusive, for pressures up to 1000 pounds. This valve is diaphragm controlled and actuated by a clock, cam, and pilot valve.

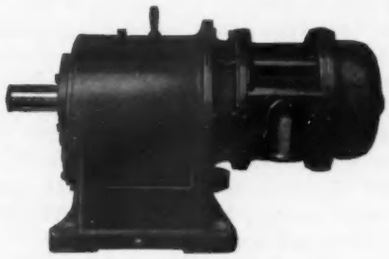
The clock and pilot mechanism is mounted as an integral part of the upper diaphragm casing. Weather-proof cover is easily removed to allow inspection or changing of cam setting. The 24-hour clock is wound through plugged opening in the cover. Clocks with cams for one complete rotation in one, six or 24 hours are available. Cam notches which govern the frequency of the input gas are cut on the job after installation is made.

The company has published Bulletin No. 80-B, which will be mailed upon request.

Motorized Reducer

LINK-BELT COMPANY

Compact, self-contained, enclosed, motorized helical gear speed reducer units, an outstanding feature of which is the unusual accessibility of the motor and the high-speed gears, has been placed on the market by Link-Belt Company, Philadelphia, Chicago and San Francisco.



Link Belt Motorized Reducer

A standard, round-frame motor, conforming with National Electrical Manufacturers' Association specifications, is secured firmly to side of reducer housing by means of an adapter casting which supports the motor shaft in oversize anti-friction bearings close to the pinion, thus assuring good alignment and proper mesh of pinion with its mate. The complete motor, with adapter and motor pinion, may be removed as a unit for inspection or maintenance, without disturbing the alignment of the motor, or of the gears remaining in the reducer housing; in fact, the motor pinion and gear are removable without disconnecting the driven machine or disturbing the low-speed gears.

All gears are of the helical type, with teeth cut from heat-treated alloy steel. Anti-friction bearings are used throughout. The low-speed shaft and its bearings are designed to carry overhung loads. A well-braced and ribbed gray iron housing provides a rigid mounting for the bearings, shafts and motor, as well as constituting a liberal-sized reservoir for automatic lubrication of the gears and bearings. Seals are provided at shaft openings to keep the oil in the housing, and the grit and dirt out.

The new motorized reducers may be mounted on floor, ceiling or wall; and are available in double reduction for one half to 75 horsepower, in ratios up to 38½ to one, and in triple reduction up to 30 horsepower, in ratios up to 292 to one. They embody the usual advantages of not requiring a motor base plate or a high-speed shaft coupling, and as the motor forms an integral part of the reducer, the proper alignment of motor shaft is definitely assured at all times.

Hardfacing Electrode

THE LINCOLN ELECTRIC COMPANY

A new arc welding electrode designed for restoring worn cutting edges on tools of all kinds and which is said to permit savings of 20 to 25 per cent in tool cost is announced by The Lincoln Electric Company, Cleveland, Ohio.

This new electrode is known as "Toolweld." By using this electrode, lathe tools, bits, milling cutters, drills, cutting and forming dies and all other tools which have become worn in service can be given a new, hard cutting edge. Tools can be refaced an unlimited number of times. Also new tools using ordinary steel in place of high-speed steels can be provided with a cutting edge.

"Toolweld" electrode provides a deposit which is equivalent to high-speed tool steel, and has the advantage of retaining its hardness (55 to 65 Rockwell C) under relatively

FIRST

IN VALUE

•

FIRST

IN SERVICE

•

AXELSON

PUMPS AND

SUCKER RODS

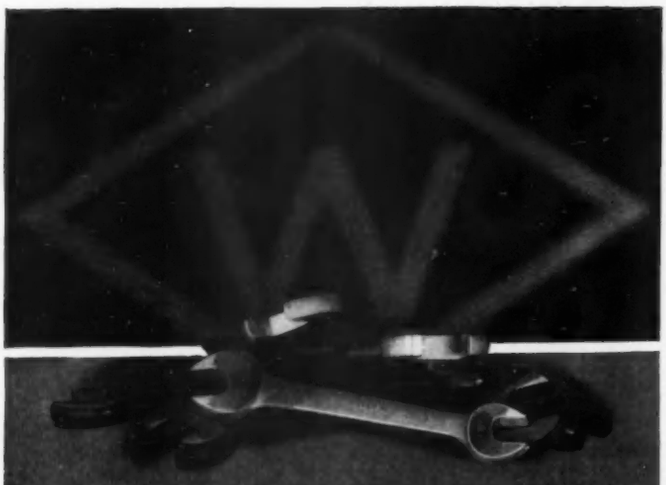
AXELSON MANUFACTURING CO.

P. O. Box 710, Vernon Station, Los Angeles

St. Louis 50 Church St., New York Tulsa

Mid-Continent and Eastern Distributor: Frick-Reid Supply Corp.

Rocky Mountain Distributor: Great Northern Tool & Supply Co.



By the makers of "Vulcan" Tongs

There is real reason why WILLIAMS is the greatest name in wrenches. Back of every tool that bears this brand is a half century of drop-forging skill—fifty years of continual experiment and improvement—five decades of sticking to a tradition that "there shall be none better". Quality and reputation are the unseen values that make every Williams' Wrench worth just a little more than the price you pay. 50 patterns—more than 1000 sizes for all oil field requirements.

Buy from your distributor

J. H. WILLIAMS & CO.

"The Drop-Forging People"

75 Spring Street New York

WESTERN WAREHOUSE AND SALES OFFICE, CHICAGO - - WORKS, BUFFALO, N. Y.

WILLIAMS

SUPERIOR DROP-FORGED TOOLS

WRENCHES

MOST COMPLETE LINE IN U. S. A.

high temperatures, up to approximately 1000 degrees Fahrenheit, according to the manufacturer.

Although the weld metal as deposited without heat treatment with "Toolweld" has a hardness of 55 to 65 Rockwell C, the degree of hardness will vary somewhat depending upon the admixture of base metal with the weld deposit. In general, hardness is increased by permitting the deposit to cool slowly and by depositing additional beads. This deposit can be heat treated in the same manner as high-speed steel but at slightly less temperature.

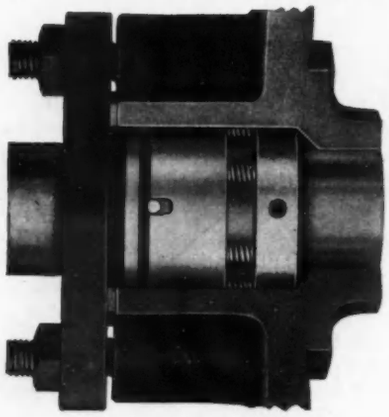
"Toolweld" provides dense non-porous shielded arc weld metal. The electrode is covered with a coating which as it is consumed in the arc, shields the arc from the atmosphere and prevents the formation of oxides and nitrides in the weld metal. This coating also helps to steady the arc and insures a smooth uniform weld deposit.

"Toolweld" electrode is made in 14-inch lengths in four sizes: 3/32 inch, ⅛-inch, 5/32-inch and 3/16-inch. It comes packed in five pound containers.

Packing

DURAMETALLIC CORPORATION

Durametallic Corporation, Kalamazoo, Michigan, has announced a new type of mechanical seal, or packing, which will be called "Dura Seal." It was developed for use on such power equipment as pumps and exhausters that handle gritty or corrosive liquids and gases. It is especially recommended for handling acids, alkalies and dirty liquids containing solids. It can be applied to ordinary stuffing boxes.



Durametallic Packing

On higher pressures an assembly in which the member rotating with the shaft is placed entirely within the stuffing box, and revolves against the faced off gland or special stationary bushing should be used. On moderate pressures an outside assembly in which the seal ring rotates against the gland faced off and reversed is recommended.

Kansas Geological Bulletins Issued

The State Geological Survey of Kansas at Lawrence, Kansas, has announced the publication of "Mineral Resources Circular 3", by Edward A. Koester at a mailing charge of $.20 and "Contributions to the Paleontology of Kansas, No. 3", by Maxim K. Elias at mailing charge of $.05. The former, containing 76 pages, deals with the development of oil and gas resources in Kansas in 1932 and 1933, and contains much valuable information on oil and gas producing horizons and development of the fields, especially in the western portion of the state. The latter, containing 75 pages, deals with cephalopods of the Pierre formation of Wallace County.

Squeaks *from the* BULL WHEEL

A cathead don't have whiskers,
A cathead don't have fur,
But every man on a derrick floor
Knows what the cathead's for.

"I owe all my success to only one thing. Pluck, just pluck."

"How do you find the right people to pluck?"

"Will you donate something to the Old Ladies' Home?"

"With pleasure. Help yourself to my mother-in-law."

Waiter (to patron who has been kept waiting for some time): "What is it you wish, sir?"

Patron (sarcastically): "Well, what I originally came in for was breakfast, but if dinner's ready now, I'll take supper."

Customer—"Have you anything for gray hairs?"

Clerk—"Nothing but the greatest respect, Madame."

A certain man boasted of his ability to recognize a man's profession by merely looking at him.

"You see that man opposite us?" he remarked in a railway station one day. "I am willing to wager that he is a barber."

"You are mistaken," replied one of his friends; "that man is a butcher."

"Impossible! You never saw a butcher with such white hands."

"Perhaps, but I still maintain that he is a butcher."

"How do you know?"

"He shaved me last week."

A group of men in a hotel in a western Canadian city were debating the race question. Included were an Englishman and a Scotchman. The former was speaking in somewhat disparaging terms of the Scots in Canada, and the mixing of the race with the Indians.

"You will find," he said, " a great many Scotch half-breeds and French half-breeds, but never an English half-breed."

"That, I can well understand," drawled the Scot. "The squaws had to draw the line somewhere."

Not everybody is engaged all the time in chasing the very elusive dollar. For instance, there was the storekeeper in a little Southern village, who was playing checkers in the back room of his store.

A customer entered, and the other checker player looked up and said:

"Jim, there's a customer in the store."

"Sh!" answered Jim, "keep perfectly quiet, and mebbe he'll go out again."

Film Star—Yes, I said I wanted a home with at least 10 children.

Friend—My dear, what makes you say such foolish things?

Star—The publicity department.

Marilyn, were you a good little girl at church today?

Yes, mother. A man offered me a big plate of money, and I said, "No, thank you."

Woman motorist—Oh, Mister Officer, if I show you I had a good excuse for speeding will you let me off?

Officer—Yes, let me hear it.

Woman—I was trying to catch up with the woman just ahead, to see how her dress was made.

Weren't you surprised when he proposed to you?

Yes, it was a total surprise. I hadn't even looked up his financial standing.

The census-taker called at Pie-eyed Pete's home and asked for Pete.

"He's down at the cow barn," said Pete's wife.

"Will I have any trouble finding him?"

"None at all," said Pete's wife. "He's the only one with whiskers; the rest have horns."

"What do you propose to take for your cold?" said a lady to a sneezing gentleman.

"Oh! I'll sell it very cheap. I won't haggle about the price at all."

Dasher—"How did you enjoy your vacation?"

Jerome—"Fine; the hotel where I put up didn't seem like a strange place at all. It had all the discomforts of home."

The missionary said one half the world doesn't know how the other half lives.

"That isn't true in this town."

"I was out with a toe dancer last night."

"How come?"

"Just look at my shoes."

VELLUMOID

A Fibre Packing which *is* a Fibre Packing.

Others may copy in outside appearance and these substitutes may be sold "as good as" or "similar to", but there is only one Vellumoid — a uniform, quality product made for the service required.

Insist that you receive VELLUMOID, either the Sheet or Gaskets, not a substitute. Every foot of VELLUMOID is stamped with the name VELLUMOID.

VELLUMOID

THE VELLUMOID COMPANY

Detroit, Mich., and Worcester, Mass.

Heeter's Packers and Swabs

For over a quarter century the name of C. M. Heeter Sons & Co. has been known to the oil men of America.

Heeter's Improved Patent Swabs, Corrugated Friction Sockets, Wire Line Pumping Outfits, Sand Pumps and other Gas and Oil Well Materials.

May we send you our catalog showing complete line?

C. M. Heeter, Sons & Co.
(Incorporated)
Main Office and Works, Butler, Pa.

STONE OIL TOOL COMPANY
HOUSTON, TEXAS
SOTCO
U.S.A.

RENTAL TOOL SERVICE

ROTARY FISHING TOOLS

DRILL PIPE AND CASING CUTTERS

1502 MAURY ST. PHONE C-6329
Night Taylor-7674 — Taylor-9838

FOR FURTHER INFORMATION SEE COMPOSITE CATALOG

THE FORT WORTH LABORATORIES
Field Gas Testing. Analysis of oil field brines, gas, minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B.S., Ch. E., Pres.
R. H. Fash, B.S., Vice-President
828½ Monroe St., Ft. Worth, Tex.

INDEPENDENT EXPLORATION COMPANY
Seismograph Surveys
2011 Esperson Building
Houston Texas

PATENTS
Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

HIRSCH, SUSMAN AND WESTHEIMER
ATTORNEYS AT LAW
32nd Floor Gulf Building
Houston, Texas
Specializing in Oil Law and Land Law

PATENTS
JESSE R. STONE
and LESTER B. CLARK
Patents, Infringement Litigation, Trade Marks
Associated with
Andrews, Kelley, Kurth & Campbell
2200 Gulf Bldg. Houston, Texas
Capitol 7245

Coming to
PHILADELPHIA?
Rooms with Bath for $2.50
HOTEL
PENNSYLVANIA
39TH *and* CHESTNUT STREETS

SPECIALIZED

The OIL WEEKLY solicits and will accept subscriptions only from those who actually are engaged in production and transportation of oil and gas.

RESTRICTED

Advertisers' Index

Abercrombie Pump Co.
American Askania Corp.
American Association of Petroleum Geologists . 69
American Cable Co.
American Iron & Machine Works
American Meter Co.
American Roller Bearing Co.
American Steel & Wire Co.
B. K. Appleman
Armstrong Brothers Tool Co.
Ash Grove Lime and Portland Cement Co.
Athey Truss Wheel Co.
Atlas Glycerine Co.
Axelson Manufacturing Co. 79

Baash-Ross Tool Co. 6
Badgett Lubrication Corp.
Baldwin-Duckworth Chain Corp.
Baker Oil Tools, Inc. 3
R. O. Barnsley
Barcid Sales Co.
The Barrett Co.
William M. Barrett, Inc.
J. B. Beaird Corp.
Black, Sivalls & Bryson
Bowen Air Lines
Bradford Motor Works 67
Brauer Machine & Supply Co.
Brackenridge Chemical Co.
The Brewster Co. 26
Bridgeport Machine Co. 17
Broderick & Bascom Rope Co.
The Buda Co.
E. D. Bullard Co.
Burlington-Rock Island Railroad
Butler Manufacturing Co.
A. M. Byers Co.
Byron Jackson Co.

Camerson Iron Works
Caterpillar Tractor Co.
The Cavins Company 58
Central Power & Light Co.
Chain Belt Co.
Chemical Process Corp.
Clark Brothers Co.
Cleveland Hardware & Forging Co.
Climax Engineering Co.
Continental Supply Co.
Fred E. Cooper Co. 23
Cooper-Bessemer Corp.
The Corbett Corp.
W. H. Curtin & Co.

Darling Valve & Manufacturing Co. 35
Dayton Rubber Manufacturing Co. Third Cover
Diamond Metal Co.
Dowell, Inc. 25

Eastman Oil Well Survey Co.
E. H. Edwards Co. Second Cover
Economy Electric Lantern Co. 69
Geo. H. Echols
Elliott Core Drilling Co.
Emsco Derrick & Equipment Co

Geo. E. Failing Supply Co.
The Edwin H. Fitler Co.
Ford Motor Co.
Fort Worth Laboratories 82
Frick-Reid Supply Corp.

The Garlock Packing Co.
Gas Lift Engineering Co.
Gaso Pump & Burner Mfg. Co.
Gearench Manufacturing Co.
General Electric Co.
H. P. Gott Manufacturing Co.
B. F. Goodrich Rubber Co.
Goodyear Tire & Rubber Co.
Gray Tool Co. 61
Gray Kerotest
The Guiberson Corp.
Gulf Publishing Co. 67
Gulf States Utilities Co.
Gunter Hotel

Hall & Lowrey, Inc. 60
Halliburton Oil Well Cementing Co. 15
Hamilton Brothers
Hardway & Cathey 82
Haynes Stellite Co.
Hazard Wire Rope Co.
C. M. Heeter Sons Co. 81
Hercules Motors Corp.
Hewitt Rubber Corp.
Hirsch, Susman & Westheimer 82
A. F. House
Houston Oil Field Material Co.
Houston Ready-Cut House Co.
Hughes Tool Co. Back Cover
Humble Oil & Refining Co.
Hyatt Roller Bearing Co. 4
Hydril Co.

Independent Exploration Co. 82
Ingersoll-Rand Co.

International Cement Corp.
International Derrick & Equipment Co.
International Harvester Co.
International Nickel Co.

Byron Jackson Co.
Jarecki Manufacturing Co.
W. P. Jenny
Jensen Brothers Manufacturing Co.
S. M. Jones Co.
Jones & Laughlin Steel Corp.

Kerotest Manufacturing Co. 46
Kibele Manufacturing Co.
Kobe, Inc.

Landis Machine Co.
Larkin Packer Co.
Layne & Bowler Co.
The Lane Wells Co.
Lincoln Electric Co.
Link Belt Co.
Ludlow Valve Manufacturing Co.
Lufkin Foundry & Machine Co.

MacClatchie Manufacturing Co.
Maloney Tank Mfg. Co.
Martin-Decker Corp.
F. G. Masquelette & Co.
J. H. McEvoy & Co. 57
Mengden & Sons Co.
Geo. S. Mepham Co.
Merchants Photo Service
Merco Nordstrom Valve Co.
Miller Sand Pump Co.
Mission Manufacturing Co.
Lee C. Moore & Co. 13
Muskogee Iron Works

National Bank of Tulsa
The National Supply Co.
The New Deal Specialty Co.
Norvell-Wilder Supply Co.

Oil Center Tool Co.
Oil City Brass Works
Oil Development Co.
Oil Equipment and Engineering Exposition
The Oil Well Improvements Co.
Oil Well Supply Co.
Oklahoma Gas & Electric Co.
Operation Engineers, Inc.
Osage Metal Co.
Oster-Williams

The Parkersburg Rig & Reel Co.
Pelican Well Tool & Supply Co.
Hotel Pennsylvania 82
Petroleum Iron Works
Petroleum Rectifying Co.
Pittsburgh Equitable Meter Co.
Pittsburgh Steel Co. 31
Portable Rig Co.

Raybestos Manhattan, Inc.
Reading Iron Co. 65
Reed Roller Bit Co. Front Cover
Reagan Forge & Engineering Co.
Republic Portland Cement Co.
Republic Steel Corp.
The Republic Rubber Co.
Ridge Tool Co.

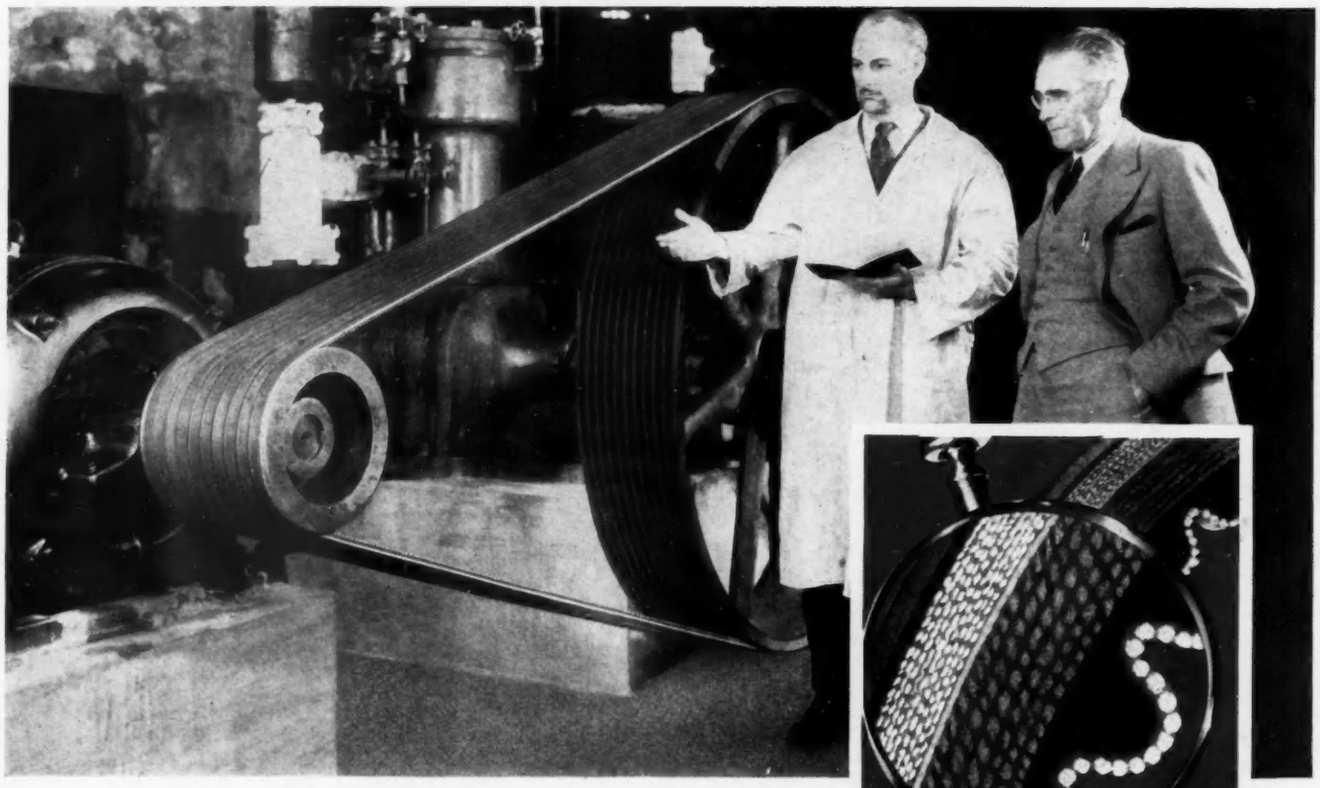
Shell Union Oil Corp.
SKF Industries, Inc.
South Chester Tube Co.
Southern Pacific Lines 38
Southwestern Machine & Supply Co.
E. M. Smith Co.
Howard Smith Co. 63
Sperry-Sun Well Surveying Co.
Jesse R. Stone and Lester B. Clark 82
Stone Oil Tool Co. 82
Sun Oil Co.
Supplementary Code Authority of the Wire Rope Industry

Texas Electric Service Co.
Texas Iron Works
Texas Rubber & Specialty Corp.
Texas Power & Light Co.
Thermoid Rubber Co.
The Toledo Pipe Threading Machine Co. 59
Tretolite Co.
Tulsa Chamber of Commerce
Twin Disc Clutch Co.

United States Rubber Co.
Union Carbide & Carbon Corp.
Union Wire Rope Co.
Vellumoid Co. 81

Waukesha Motor Co.
Western Pneumatic Co.
Wickwire-Spencer Steel Co.
Williamsport Wire Rope Co.
J. H. Williams & Co. 80
Wilson-Snyder Manufacturing Co.
Wilson Supply Co.
WKM Co.
Wyatt Metal & Boiler Works
Youngstown Sheet & Tube Co.

Turning POWER WASTES into NET PROFITS!



●*Here's the V-Belt that gives greater gripping Power with less Tension. Only Dayton V-Belts have* straight *die-cut sides that* exactly fit *the pulley grooves at all times regardless of speed or load.*

● Today, as never before, executives are analyzing and studying power transmission problems because of the savings that can be effected through the elimination of power wastes. Nowhere else can management find an equal opportunity to reduce expenses and increase net profits.

During the past seven years in thousands of industrial plants troublesome power transmission problems have been solved and real savings effected through the installation of Dayton V-Belt Drives. A production manager in a large meat packing plant said, "Our savings will total thousands of dollars a year. The short center-to-center couplings of Dayton V-Belt Drives permitted two motor-driven compressors to replace one steam compressor *in the same floor space.* Temperatures were reduced from 12° above zero to 3° above, and operating time reduced from 7 days to 5½ days per week. For the first time in 50 years no steam is required in the plant on non-operating days."

Similar savings have been made in plants of all kinds where Dayton V-Belts have been installed. Here are some of the reasons why—Dayton V-Belts are "built-to-bend." Their exclusive and patented construction makes them more flexible. They are die-cut, not molded, and accurately fit the grooves of all standard pulleys. Their rigid crosswise construction prevents distortion—there is no slipping or weaving. This means smoother running . . . positive speed . . . less tension . . . less wear on bearings. Machines last longer and there's practically no maintenance cost.

But there's much more to tell. Let us give you all the facts about the many exclusive advantages of Dayton V-Belt Drives. Wire or write today.

THE DAYTON RUBBER MFG. CO.
Dayton, Ohio
The World's Largest Manufacturers of V-Belts

Dayton
COG-BELT DRIVES

Cog-Belt Drives—F.H.P. V-Belt Drives—V-Flat Drives—Complete Drives, Pulleys and Belts in Stock. Fractional to 100 H.P.

PROVEN

HUGHES 3 CONE Roller Bearing ROCK BITS Make a Full Gauge Hole!

It's the 3 Points of Rolling Contact

HUGHES TOOL COMPANY

Service Plants:
LOS ANGELES, CALIF.
OKLAHOMA CITY, OKLA.
MIDLAND, TEXAS

Main Plant and Office:
HOUSTON,
TEXAS

Export Office:
30 ROCKEFELLER PLAZA
NEW YORK CITY